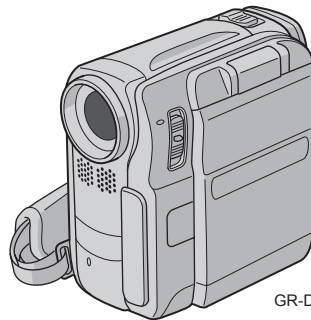


# JVC

## SERVICE MANUAL

DIGITAL VIDEO CAMERA

### GR-DX77US, GR-DX97US



Mini **DV** NTSC  
**DSC**  
DIGITAL  
STILL CAMERA

GR-DX77US[M4D3S7], GR-DX97US[M4D3M7]

For disassembling and assembling of MECHANISM ASSEMBLY, refer to the SERVICE MANUAL No.86700(MECHANISM ASSEMBLY).

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# SPECIFICATION

## Camcorder

### For General

#### Power supply

DC 11 V (Using AC Adapter)

DC 7.2 V (Using battery pack)

#### Power consumption

Approx. 3.1 W (3.8W\*) (LCD monitor off, viewfinder on)

Approx. 3.9 W (4.6W\*) (LCD monitor on, viewfinder off)

Approx. 6.4 W (Maximum; when charging a battery)

\* Using LED Light

#### Dimensions (W x H x D)

52 mm x 93 mm x 94 mm

(2-1/16" x 3-11/16" x 3-3/4") (with the LCD monitor closed and the viewfinder pushed back in)

#### Weight

Approx. 435 g (0.96 lbs)

(without battery, cassette, memory card, lens cap and grip strap)

Approx. 510 g (1.2 lbs)

(incl. battery, cassette, memory card, lens cap and grip strap)

#### Operating temperature

0°C to 40°C (32°F to 104°F)

#### Operating humidity

35% to 80%

#### Storage temperature

-20°C to 50°C (-4°F to 122°F)

#### Pickup

1/6" CCD

#### Lens

F 1.2, f = 2.6 mm to 31.2 mm, 12:1 power zoom lens

#### Filter diameter

ø27 mm

#### LCD monitor

3.0"/2.5\*\*\* diagonally measured, LCD panel/TFT active matrix system

\* GR-DX97

\*\* GR-DX77

#### Viewfinder

Electronic viewfinder with 0.3" color LCD

#### Speaker

Monaural

#### LED Light

Effective distance: 1.5 m (5 ft)

### For Digital Video Camera

#### Format

DV format (SD mode)

#### Signal format

NTSC standard

#### Recording/Playback format

Video: Digital component recording

Audio: PCM digital recording, 32 kHz 4-channel (12-BIT),

48 kHz 2-channel (16-BIT)

#### Cassette

Mini DV cassette

#### Tape speed

SP: 18.8 mm/s, LP: 12.5 mm/s

#### Maximum recording time (using 80 min. cassette)

SP: 80 min., LP: 120 min.

### For Digital Still Camera

#### Storage media

SD Memory Card/MultiMediaCard

#### Compression system

Still image: JPEG (compatible)

Moving image: MPEG4 (compatible)

#### File size

Still image:

2 modes (1024 x 768 pixels/640 x 480 pixels)

Moving image:

1 mode (160 x 120 pixels)

#### Picture quality

2 modes (FINE/STANDARD)

#### Approximate number of storable images

☞ pg. 21

### For Connectors

#### AV

S-Video input:

Y: 0.8 V to 1.2 V (p-p), 75 Ω, analog

C: 0.2 V to 0.4 V (p-p), 75 Ω, analog

S-Video output:

Y: 1.0 V (p-p), 75 Ω, analog

C: 0.29 V (p-p), 75 Ω, analog

Video input: 0.8 V to 1.2 V (p-p), 75 Ω, analog

Video output: 1.0 V (p-p), 75 Ω, analog

Audio input: 300 mV (rms), 50 kΩ, analog, stereo

Audio output: 300 mV (rms), 1 kΩ, analog, stereo

Edit: ø3.5 mm, 2-pole

#### Microphone input

ø3.5 mm, stereo

#### DV

Input/output: 4-pin, IEEE 1394 compliant

#### USB

5-pin

### AC Adapter

#### Power requirement

AC 110 V to 240 V~, 50 Hz/60 Hz

#### Output

DC 11 V , 1 A

Specifications shown are for SP mode unless otherwise indicated. E & O.E. Design and specifications subject to change without notice.

# SECTION 1 PRECAUTIONS

## 1.1 SAFTY PRECAUTIONS

Prior to shipment from the factory, JVC products are strictly inspected to conform with the recognized product safety and electrical codes of the countries in which they are to be sold. However, in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced.

### 1.1.1 Precautions during Servicing

- (1) Locations requiring special caution are denoted by labels and inscriptions on the cabinet, chassis and certain parts of the product. When performing service, be sure to read and comply with these and other cautionary notices appearing in the operation and service manuals.
- (2) Parts identified by the  symbol and shaded (  ) parts are critical for safety. Replace only with specified part numbers.

#### NOTE :

**Parts in this category also include those specified to comply with X-ray emission standards for products using cathode ray tubes and those specified for compliance with various regulations regarding spurious radiation emission.**

- (3) Fuse replacement caution notice.  
Caution for continued protection against fire hazard.  
Replace only with same type and rated fuse(s) as specified.
- (4) Use specified internal wiring. Note especially:
  - Wires covered with PVC tubing
  - Double insulated wires
  - High voltage leads
- (5) Use specified insulating materials for hazardous live parts.  
Note especially:
  - Insulation Tape
  - PVC tubing
  - Spacers
  - Insulation sheets for transistors
  - Barrier
- (6) When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.) wrap ends of wires securely about the terminals before soldering.

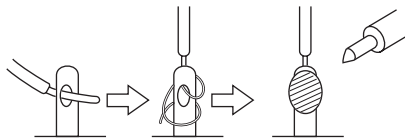


Fig.1-1-1

- (7) Observe that wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.)
- (8) Check that replaced wires do not contact sharp edged or pointed parts.
- (9) When a power cord has been replaced, check that 10-15 kg of force in any direction will not loosen it.

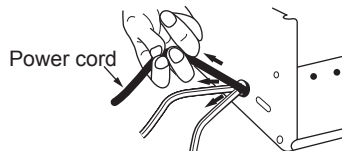


Fig.1-1-2

- (10) Also check areas surrounding repaired locations.
- (11) Products using cathode ray tubes (CRTs) In regard to such products, the cathode ray tubes themselves, the high voltage circuits, and related circuits are specified for compliance with recognized codes pertaining to X-ray

emission. Consequently, when servicing these products, replace the cathode ray tubes and other parts with only the specified parts. Under no circumstances attempt to modify these circuits. Unauthorized modification can increase the high voltage value and cause X-ray emission from the cathode ray tube.

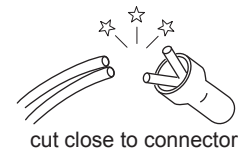
- (12) Crimp type wire connector In such cases as when replacing the power transformer in sets where the connections between the power cord and power transformer primary lead wires are performed using crimp type connectors, if replacing the connectors is unavoidable, in order to prevent safety hazards, perform carefully and precisely according to the following steps.

• **Connector part number** :E03830-001

• **Required tool** : Connector crimping tool of the proper type which will not damage insulated parts.

• **Replacement procedure**

- a) Remove the old connector by cutting the wires at a point close to the connector. Important : Do not reuse a connector (discard it).



cut close to connector

Fig.1-1-3

- b) Strip about 15 mm of the insulation from the ends of the wires. If the wires are stranded, twist the strands to avoid frayed conductors.

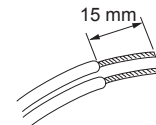


Fig.1-1-4

- c) Align the lengths of the wires to be connected. Insert the wires fully into the connector.

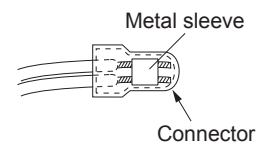


Fig.1-1-5

- d) As shown in Fig.1-1-6, use the crimping tool to crimp the metal sleeve at the center position. Be sure to crimp fully to the complete closure of the tool.

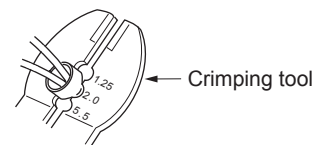


Fig.1-1-6

- e) Check the four points noted in Fig.1-1-7.

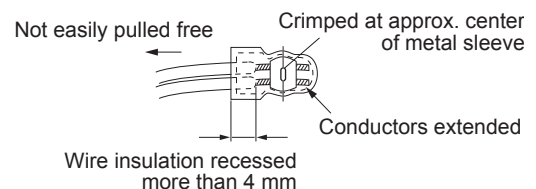
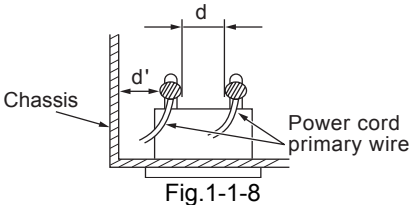


Fig.1-1-7

1.1.2 Safety Check after Servicing

Examine the area surrounding the repaired location for damage or deterioration. Observe that screws, parts and wires have been returned to original positions. Afterwards, perform the following tests and confirm the specified values in order to verify compliance with safety standards.

- (1) Insulation resistance test
- Confirm the specified insulation resistance or greater between power cord plug prongs and externally exposed parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.).See table 1 below.
- (2) Dielectric strength test
- Confirm specified dielectric strength or greater between power cord plug prongs and exposed accessible parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See Fig.1-1-11 below.
- (3) Clearance distance
- When replacing primary circuit components, confirm specified clearance distance (d), (d') between soldered terminals, and between terminals and surrounding metallic parts. See Fig.1-1-11 below.



- (4) Leakage current test
- Confirm specified or lower leakage current between earth ground/power cord plug prongs and externally exposed accessible parts (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.).
- Measuring Method : (Power ON)Insert load Z between earth ground/power cord plug prongs and externally exposed accessible parts. Use an AC voltmeter to measure across both terminals of load Z. See Fig.1-1-9 and following Fig.1-1-12.

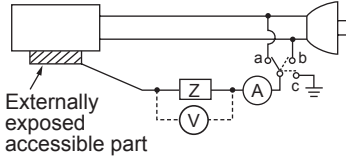
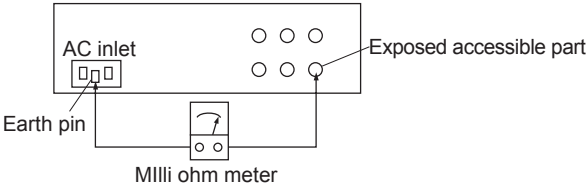


Fig.1-1-9

- (5) Grounding (Class 1 model only)
- Confirm specified or lower grounding impedance between earth pin in AC inlet and externally exposed accessible parts (Video in, Video out, Audio in, Audio out or Fixing screw etc.).Measuring Method:
- Connect milli ohm meter between earth pin in AC inlet and exposed accessible parts. See Fig.1-1-10 and grounding specifications.



Grounding Specifications

| Region             | Grounding Impedance (Z)  |
|--------------------|--------------------------|
| USA & Canada       | $Z \leq 0.1 \text{ ohm}$ |
| Europe & Australia | $Z \leq 0.5 \text{ ohm}$ |

Fig.1-1-10

| AC Line Voltage | Region             | Insulation Resistance (R)                                           | Dielectric Strength          | Clearance Distance (d), (d')                                                 |
|-----------------|--------------------|---------------------------------------------------------------------|------------------------------|------------------------------------------------------------------------------|
| 100 V           | Japan              | $R \geq 1 \text{ M}\Omega/500 \text{ V DC}$                         | AC 1 kV 1 minute             | $d, d' \geq 3 \text{ mm}$                                                    |
| 100 to 240 V    |                    |                                                                     | AC 1.5 kV 1 minute           | $d, d' \geq 4 \text{ mm}$                                                    |
| 110 to 130 V    | USA & Canada       | $1 \text{ M}\Omega \leq R \leq 12 \text{ M}\Omega/500 \text{ V DC}$ | AC 1 kV 1 minute             | $d, d' \geq 3.2 \text{ mm}$                                                  |
| 110 to 130 V    | Europe & Australia | $R \geq 10 \text{ M}\Omega/500 \text{ V DC}$                        | AC 3 kV 1 minute (Class II)  | $d \geq 4 \text{ mm}$                                                        |
| 200 to 240 V    |                    |                                                                     | AC 1.5 kV 1 minute (Class I) | $d' \geq 8 \text{ mm (Power cord)}$<br>$d' \geq 6 \text{ mm (Primary wire)}$ |

Fig.1-1-11

| AC Line Voltage              | Region             | Load Z | Leakage Current (i)                                      | a, b, c                  |
|------------------------------|--------------------|--------|----------------------------------------------------------|--------------------------|
| 100 V                        | Japan              |        | $i \leq 1 \text{ mA rms}$                                | Exposed accessible parts |
| 110 to 130 V                 | USA & Canada       |        | $i \leq 0.5 \text{ mA rms}$                              | Exposed accessible parts |
| 110 to 130 V<br>220 to 240 V | Europe & Australia |        | $i \leq 0.7 \text{ mA peak}$<br>$i \leq 2 \text{ mA dc}$ | Antenna earth terminals  |
|                              |                    |        | $i \leq 0.7 \text{ mA peak}$<br>$i \leq 2 \text{ mA dc}$ | Other terminals          |

Fig.1-1-12

NOTE :

These tables are unofficial and for reference only. Be sure to confirm the precise values for your particular country and locality.

## SECTION 2

### SPECIFIC SERVICE INSTRUCTIONS

The following table indicate main different points between models GR-DX77US and GR-DX97US

| MODEL       | GR-DX77US   | GR-DX97US   |
|-------------|-------------|-------------|
| LCD MONITOR | 2.5INCH     | 3.0INCH     |
| MEMORY CARD | YES(Option) | YES(MMC8MB) |

## SECTION 3 DISASSEMBLY

### 3.1 BEFORE ASSEMBLY AND DISASSEMBLY

#### 3.1.1 Precautions

- Be sure to disconnect the power supply unit prior to mounting and soldering of parts.
- Prior to removing a component part that needs to disconnect its connector(s) and its screw(s), first disconnect the wire(s) from the connector(s), and then remove the screw(s).
- When connecting/disconnecting wires, pay enough attention not to damage the connectors.
- When inserting the flat wire to the connector, pay attention to the direction of the flat wire.
- Be careful in removing the parts to which some spacer or shield is attached for reinforcement or insulation.
- When replacing chip parts (especially IC parts), first remove the solder completely to prevent peeling of the pattern.
- Tighten screws properly during the procedures. Unless specified otherwise, tighten screws at a torque of 0.118N·m (1.2kgf·cm). However, 0.118N·m (1.2kgf·cm) is a value at the time of production. At the time of service, perform the procedure at a torque 10% less than 0.118N·m (1.2kgf·cm). (See "SERVICE NOTE" as for tightening torque.)

#### 3.1.2 Destination of connectors

Two kinds of double-arrows in connection tables respectively show kinds of connector/wires.

↔ : Flat wire    ↔ : Wire    ↔ : Board to board (B-B)  
 □ : The connector of the side to remove

| CONN. No. | CONNECTOR |       |   |         |       | PIN No. |
|-----------|-----------|-------|---|---------|-------|---------|
| CN2a      | MAIN      | CN101 | ↔ | MONI BW | CN761 | 40      |
| CN2b      | MAIN      | CN103 | ↔ | MINI BW | CN762 | 10      |

#### 3.1.3 Disconnection of connectors (Wires)

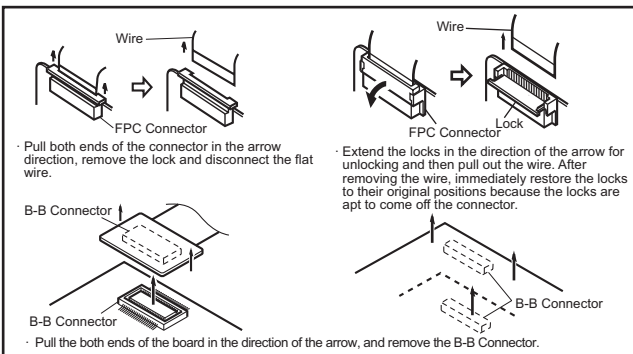


Fig.3-1-1

#### 3.1.4 Tools required for disassembly and assembly

|                                       |                           |                   |
|---------------------------------------|---------------------------|-------------------|
| Torque driver<br>YTU94088             | Bit<br>YTU94088-003       | Tweezers<br>P-895 |
| Chip IC replacement jig<br>PTS40844-2 | Cleaning cloth<br>KSMM-01 |                   |

Fig.3-1-2

#### • Torque driver

Be sure to use to fastening the mechanism and exterior parts because those parts must strictly be controlled for tightening torque.

#### • Bit

This bit is slightly longer than those set in conventional torque drivers.

#### • Tweezers

To be used for removing and installing parts and wires.

#### • Chip IC replacement jig

To be used for replacement of IC.

#### • Cleaning cloth

Recommended cleaning cloth to wipe down the video heads, mechanism (tape transport system), optical lens surface.

### 3.2 ASSEMBLY AND DISASSEMBLY OF MAIN PARTS

#### 3.2.1 Assembly and disassembly

When reassembling, perform the step(s) in reverse order.

| STEP No. | PART                                             | Fig. No. | POINT                                        | NOTE   |
|----------|--------------------------------------------------|----------|----------------------------------------------|--------|
| [1]      | TOP COVER ASSY                                   | Fig.C1   | 4(S1a), 3(L1a),CN1a                          | -      |
| [2]      | UPPER ASSY<br>(Inc. VF ASSY,<br>SPEAKER/MONITOR) | Fig.C2-1 | (S2a),2(S2b),3(S2c)<br>2(SD1a),<br>L2,CN2a,b | -      |
| [8]      | E.VF UNIT(B/W)                                   | Fig.C2-2 | 2(S8),L8,CN8a                                | NOTE 8 |
| (*1)     | (*2)                                             | (*3)     | (*4)                                         | (*5)   |

#### (\*1) Order of steps in Procedure

When reassembling, preform the step(s) in the reverse order. These numbers are also used as the identification (location) No. of parts Figures.

#### (\*2) Part to be removed or installed.

#### (\*3) Fig. No. showing Procedure or Part Location.

C = CABINET

#### (\*4) Identification of part to be removed, unhooked, unlocked, released, unplugged, unclamped or unsoldered.

S = Screw

L = Lock, Release, Hook

SD = Solder

CN = Connector

#### [Example]

- 4 (S1a) = Remove 4 S1a screws.
- 3 (L1a) = Disengage 3 L1a hooks.
- 2 (SD1a) = Unsolder 2 SD1a points.
- CN1a = Remove a CN1a connector.

#### (\*5) Adjustment information for installation.

### 3.2.2 ASSEMBLY/DISASSEMBLY OF CABINET PARTS AND ELECTRICAL PARTS

#### ●Disassembly procedure

| STEP No. | PART NAME                                          | Fig. No. | POINT                                                     | NOTE       |
|----------|----------------------------------------------------|----------|-----------------------------------------------------------|------------|
| [1]      | CASSETTE COVER ASSY                                | Fig.C1   | GRIP BELT ASSY,2(S1),HOOK(F)(S1),L1a,COVER(ADJ),4(S1),L1b | NOTE1      |
| [2]      | SIDE COVER(R)                                      | Fig.C2   | (S2a),(S2b),L2a,L2b                                       | -          |
| [3]      | TOP COVER                                          |          | 2(S3),2(L3)                                               | -          |
| [4]      | SIDE COVER(L)ASSY                                  | Fig.C3   | 6(S4a),(S4b),(S4c),COVER(DV)ASSY JACK COVER ASSY          | NOTE4a, b  |
| [5]      | UPPER CASE ASSY                                    | Fig.C4   | (S5),L5,COVER(JIG CON),4(S5),CN5                          | NOTE5      |
| [6]      | FRONT COVER ASSY                                   | Fig.C5   | 5(S6),CN6                                                 | NOTE6      |
| [7]      | MIC ASSY                                           |          | 2(S7)                                                     | NOTE7      |
| [8]      | REAR COVER ASSY                                    | Fig.C6   | 2(S8),3(L8),CN8                                           | NOTE8      |
| [9]      | MONITOR BOARD                                      | Fig.C7   | 2(S9),3(L9a),BKT(TOP)ASSY CN9a,b,6(S9),L9b,2(L9c)         | NOTE9      |
| [10]     | SD BOARD ASSY                                      | Fig.C8   | CN10,(S10)                                                | -          |
| [11]     | LOWER UNIT ASSY<br>(INCLUDE VF ASSY/OP BLOCK ASSY) |          | CN11a,b,c,d,e,3(S11)                                      | -          |
| [12]     | VF ASSY                                            | Fig.C9   | 4(S12)                                                    | NOTE12a, b |
| [13]     | OP BLOCK ASSY/CCD BOARD ASSY                       |          | (S13a),2(S13b),2(L13)                                     | NOTE13     |
| [14]     | MAIN BOARD ASSY                                    | Fig.C10  | 2(S14),2(L14a),SHIELD COVER CN14a,b,c,L14b                | NOTE14     |
| [15]     | MDA BOARD ASSY                                     | Fig.C11  | CN15a,b,c,d,2(S15)                                        | -          |
| [16]     | MECHANISM ASSY                                     |          | (S16a),BKT(PRE-REC),3(S16b) BKT(MECHA)ASSY                | NOTE16     |

#### NOTE1:

Before removing the CASSETTE COVER ASSEMBLY, remove the GRIP BELT ASSEMBLY.

#### NOTE4a:

During the procedure, be careful in handling the parts.

#### NOTE4b:

In attaching the SIDE COVER (L) ASSEMBLY, attach the COVER (JACK, DV) ASSEMBLY at the same time.

#### NOTE5:

In removing the UPPER CASE ASSEMBLY, be careful not to damage connectors.

#### NOTE6:

In attaching the FRONT COVER ASSEMBLY, be careful not to cut or damage wires.

#### NOTE7:

In attaching the MIC ASSEMBLY, be careful not to cut or damage wires.

#### NOTE8:

When attaching the REAR COVER ASSEMBLY, be careful about the position of switch.

#### NOTE9:

For the disassembly procedure of the MONITOR ASSEMBLY, see "3.2.3 DISASSEMBLY of [9] MONITOR ASSEMBLY"

#### NOTE12a:

Pull out the VF ASSEMBLY, and remove one screw (No.46).

#### NOTE12b:

For the disassembly procedure of the VF ASSEMBLY, see "3.2.4 DISASSMBLY of [12] VF ASSEMBLY"

#### NOTE13:

For the disassembly procedure of the OP BLOCK ASSEMBLY/CCD BOARD ASSEMBLY, see "3.2.5 DISASSEMBLY of [13] OP BLOCK ASSEMBLY/CCD BOARD ASSEMBLY"

#### NOTE14:

In removing the MAIN BOARD ASSEMBLY, remove the SPACER.

#### NOTE16:

Be careful in handling the parts.

#### ●Destination of connectors

| CN.NO. | CONNECTOR |       |   |                   | PIN NO.                  |
|--------|-----------|-------|---|-------------------|--------------------------|
| CN5    | MAIN      | CN115 | ⇔ | SUB OPE UNIT      | - 6                      |
| CN6    | MAIN      | CN111 | ⇔ | MIC ASSY          | - 4                      |
| CN8    | MAIN      | CN109 | ⇔ | CAMERA OPE UNIT   | - 13                     |
| CN9a   | MAIN      | CN104 | ⇔ | MONITOR           | CN7601 /CN7602 39/20, 20 |
| CN9b   | MAIN      | CN108 | ⇔ | POWER OPE UNIT    | - 7                      |
| CN10   | MAIN      | CN114 | ⇔ | SD                | CN701 12                 |
| CN11a  | MAIN      | CN112 | ⇔ | FRONT             | CN401 12                 |
| CN11b  | MAIN      | CN107 | ⇔ | OP BLOCK ASSY     | - 28                     |
| CN11c  | MAIN      | CN102 | ⇔ | CCD               | CN5501 20                |
| CN11d  | MAIN      | CN101 | ⇔ | BATT. TERM.       | - 21                     |
| CN11e  | MAIN      | CN113 | ⇔ | VF FPC ASSY       | - 22/20                  |
| CN14a  | MAIN      | CN106 | ⇔ | SENSOR            | - 16                     |
| CN14b  | MAIN      | CN103 | ⇔ | MDA               | CN305 30                 |
| CN14c  | MAIN      | CN110 | ⇔ | HEAD              | - 8                      |
| CN15a  | MDA       | CN301 | ⇔ | CAPSTAN MOTOR     | - 18                     |
| CN15b  | MDA       | CN302 | ⇔ | DRUM MOTOR        | - 11                     |
| CN15c  | MDA       | CN303 | ⇔ | ROTARY ENCODER SW | - 6                      |
| CN15d  | MDA       | CN304 | ⇔ | LOADING MOTOR     | - 6                      |

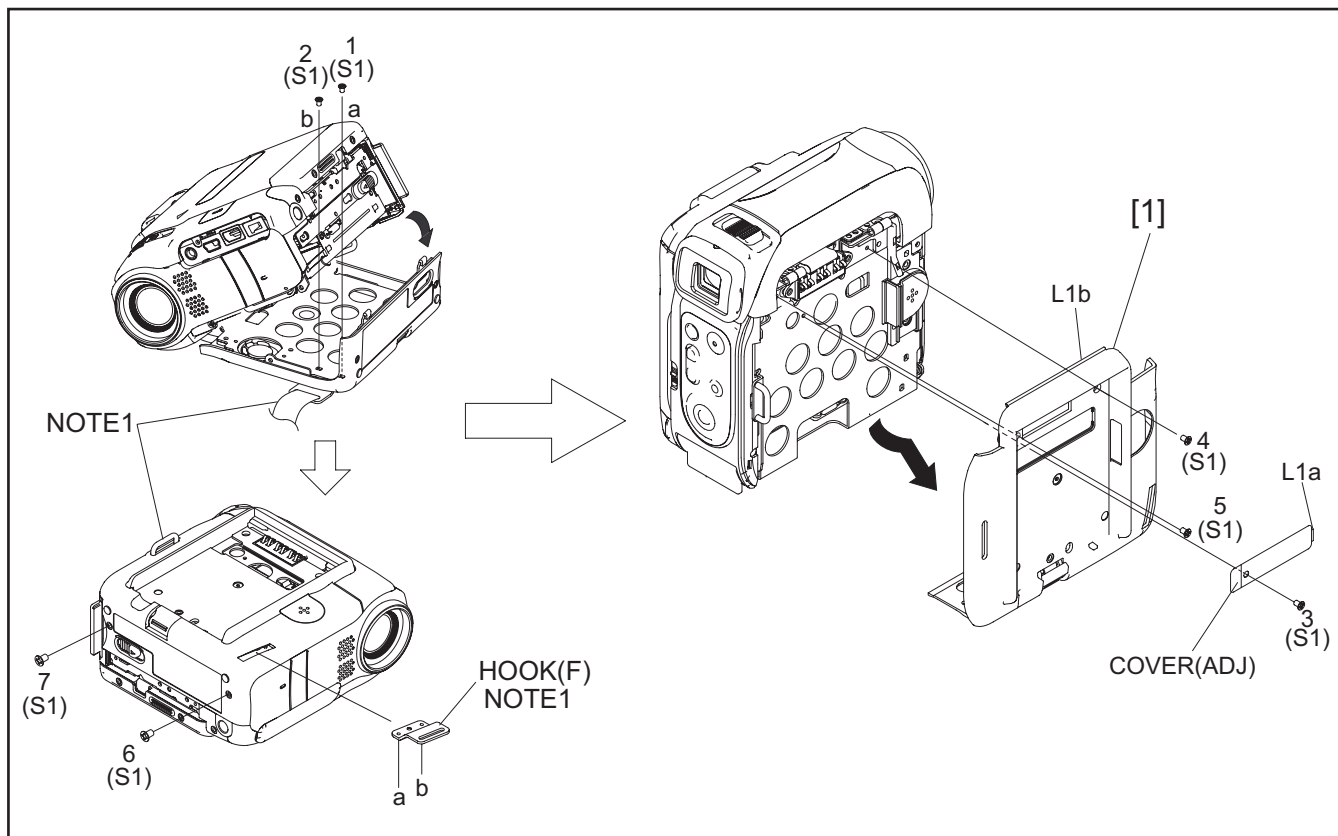


Fig.C1

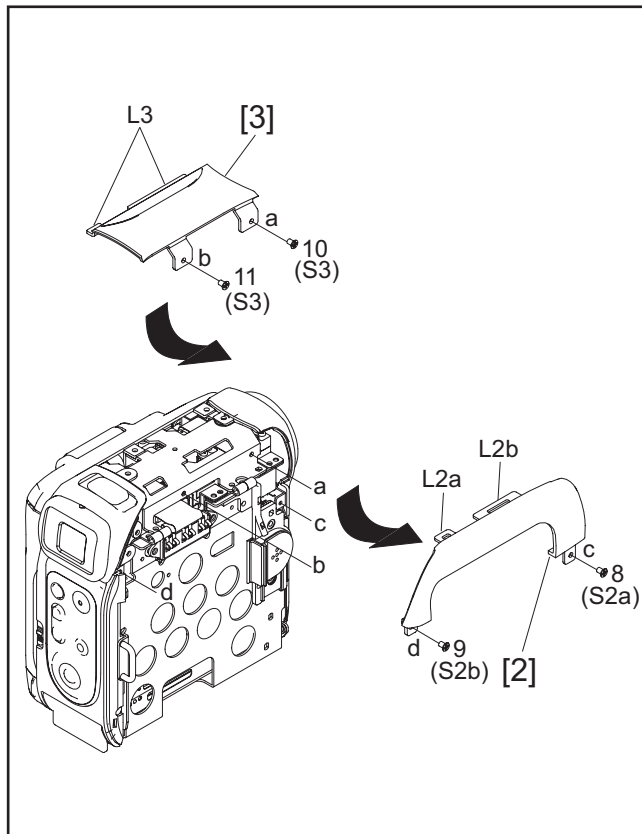


Fig.C2

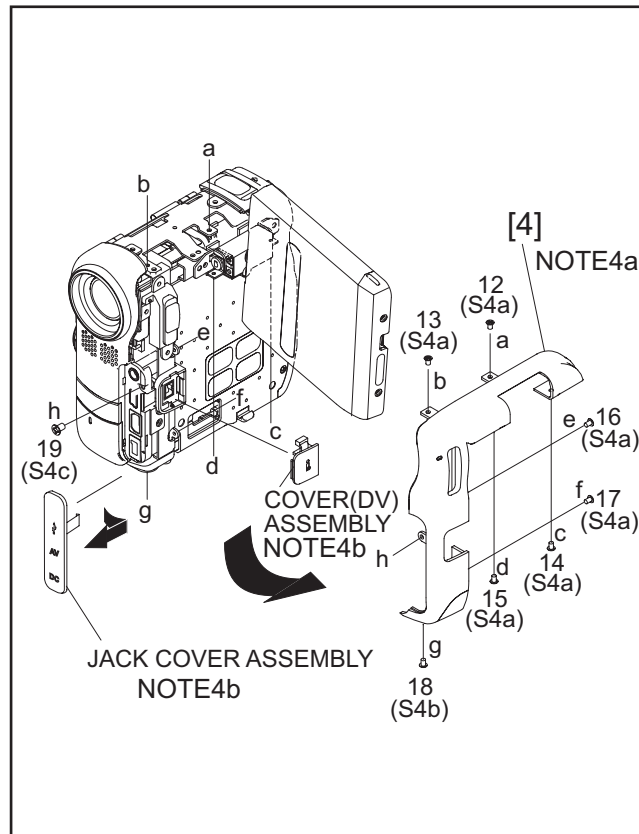


Fig.C3

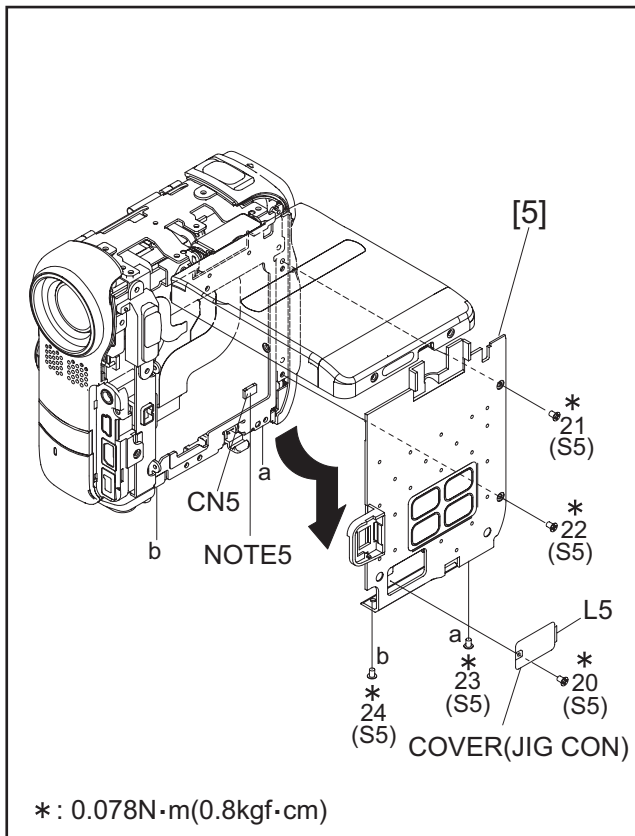


Fig.C4

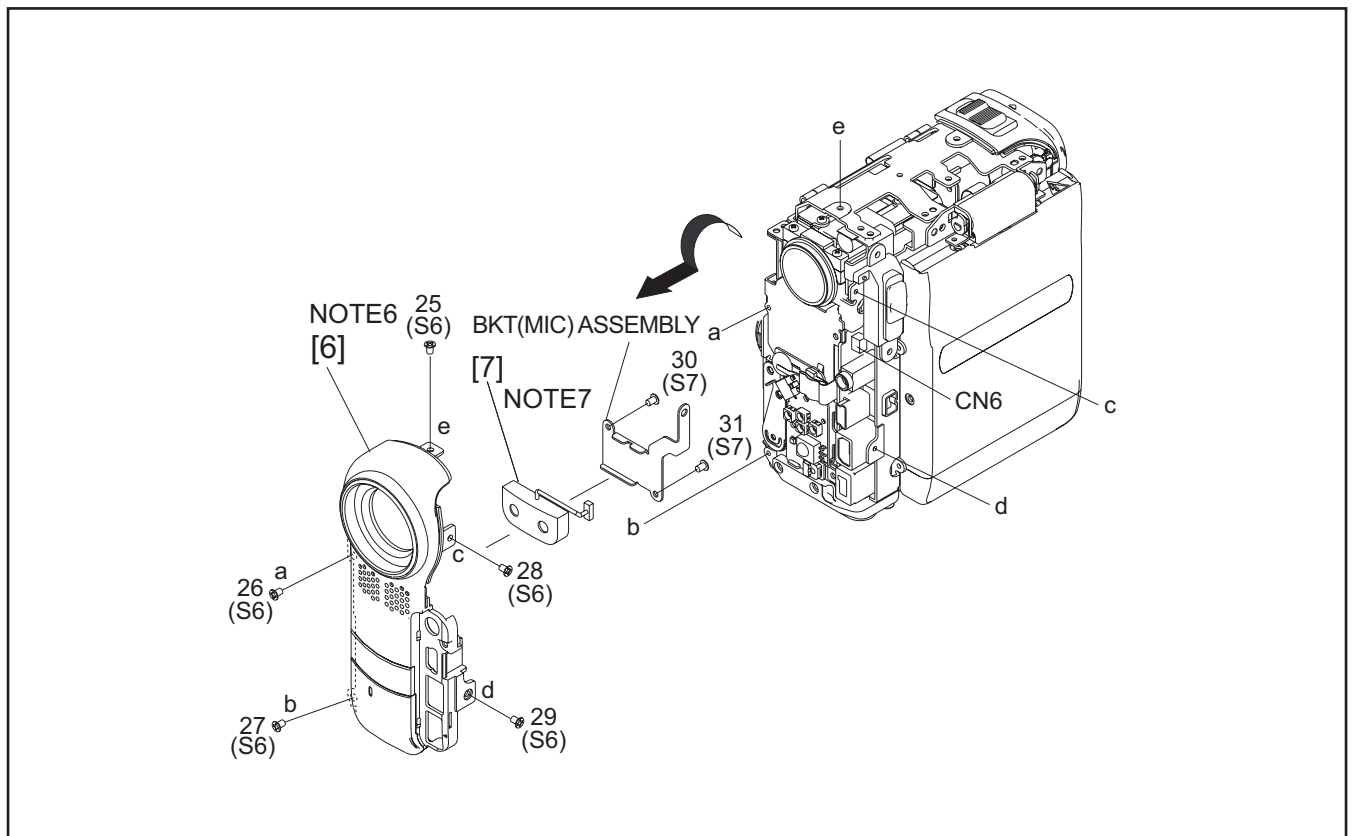


Fig.C5

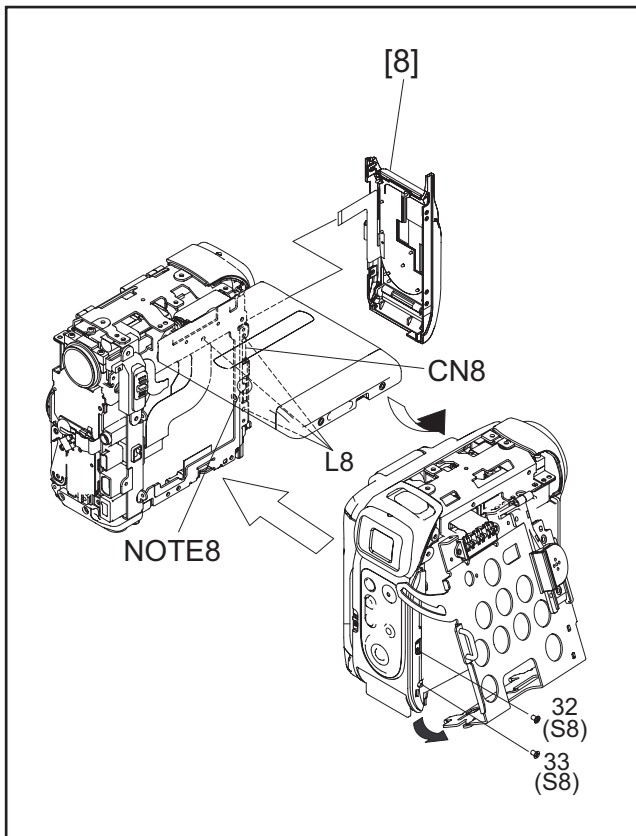


Fig.C6

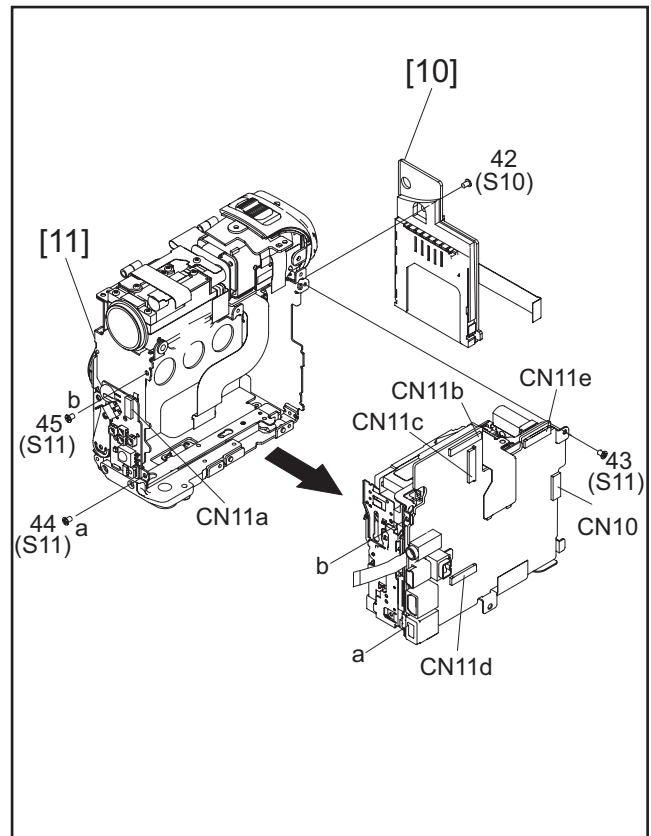


Fig.C8

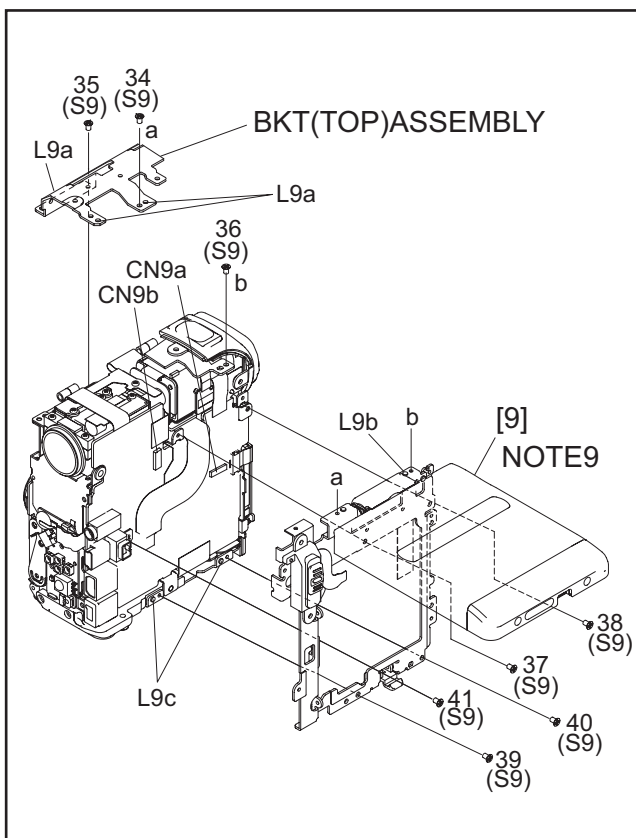


Fig.C7

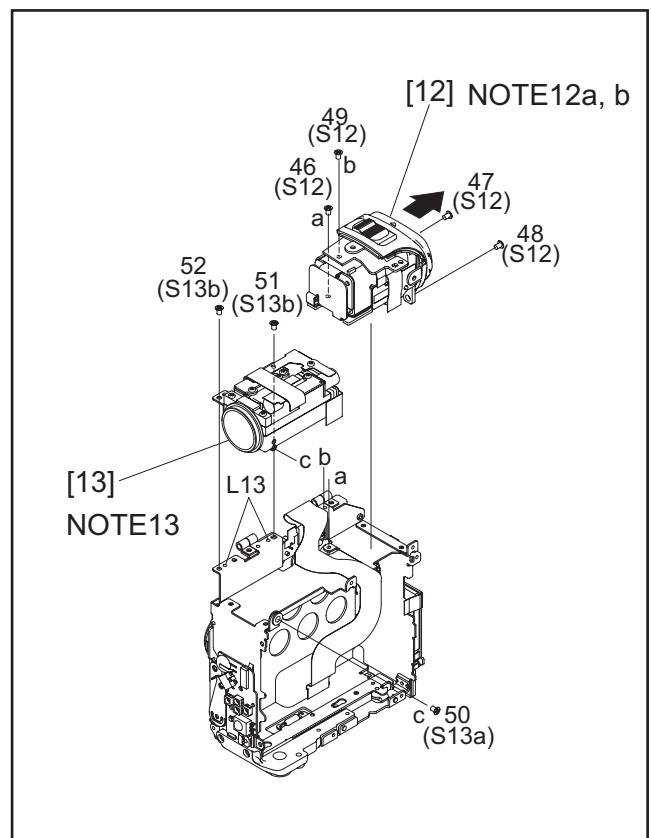


Fig.C9

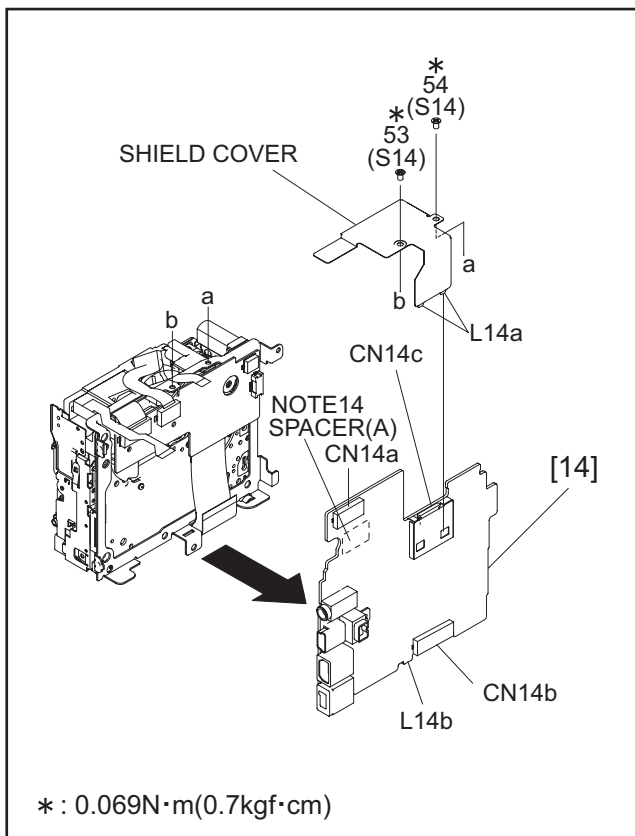


Fig.10

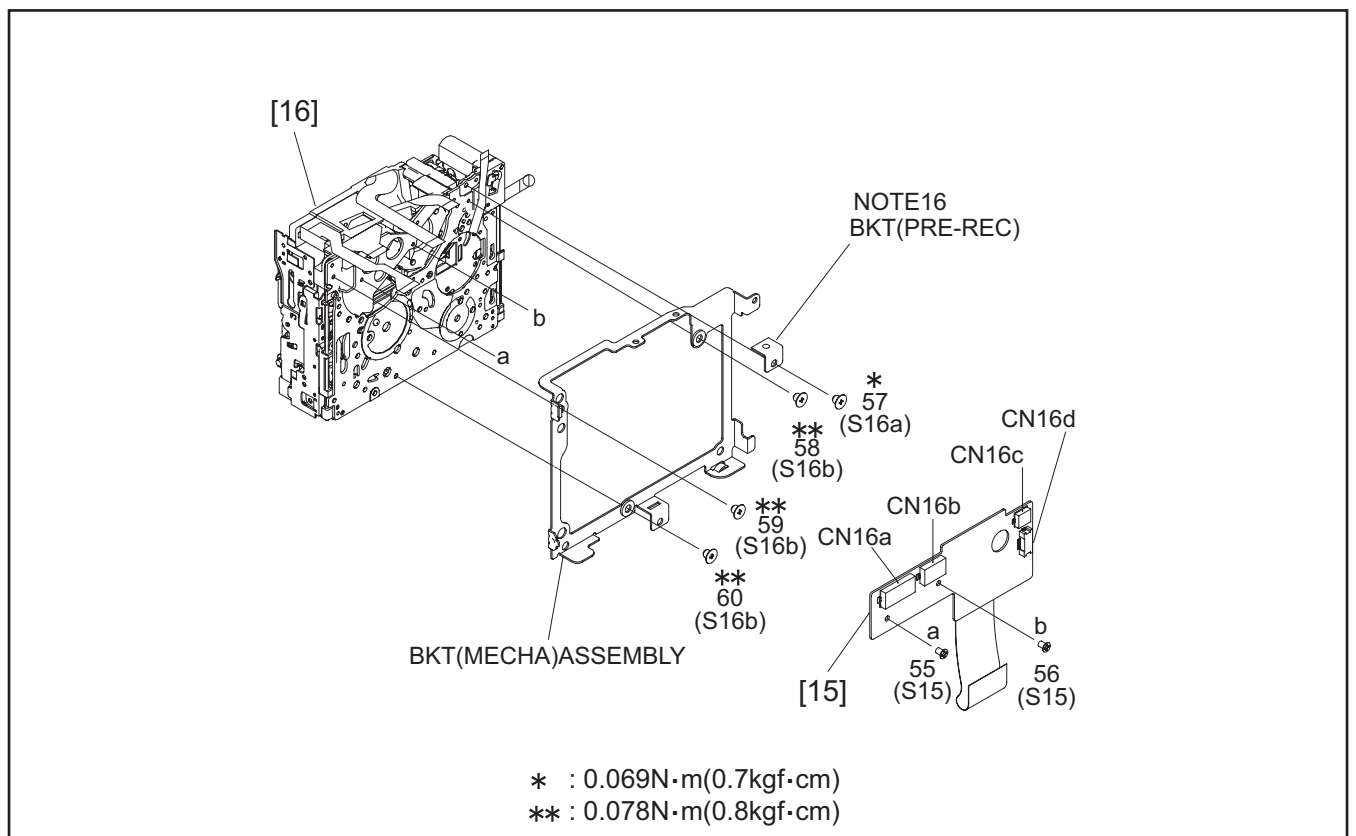


Fig.C11

### 3.2.3 DISASSEMBLY of [9] MONITOR ASSEMBLY

#### ●CAUTIONS

- (1) During the procedure, be careful in handling the LCD MODULE, etc., especially not to damage or soil the monitor screen. If it is soiled with fingerprints, etc., gently clean it with chamois or the cleaning cloth.
- (2) Since the BACKLIGHT is soldered to the BOARD ASSEMBLY (SD9), the BACKLIGHT should not be separated from the BOARD ASSEMBLY except when replacing the BACKLIGHT.
- (3) Remove the POWER (OPE) UNIT if necessary.

#### ●Disassembly

- (1) Remove the three screws (1-3) so that the FPC moves easily.
- (2) Remove the two screws (4 and 5), and remove the MONITOR ASSEMBLY from the FRAME (UP) ASSEMBLY.

- (3) While removing the five screws (6-10) in numerical order and disengaging the two hooks (L9a and L9b) in alphabetical order, remove the MONITOR COVER ASSY.
- (4) Remove the SWITCH BOARD from the MONITOR CASE.
- (5) Unlock the two connectors CN9a and CN9b, and raise and remove the HINGE UNIT ASSEMBLY.

#### NOTE9a:

During the procedure, be careful in handling the FPC ASSEMBLY.

- (6) Unlock one connector CN9c, and remove the FPC.
- (7) Remove one screw (11), and remove the MONITOR BOARD ASSEMBLY together with the BACKLIGHT.
- (8) Remove the LCD BRACKET (2).
- (9) Remove the LCD MODULE.
- (10) Remove the LCD BRACKET (1).

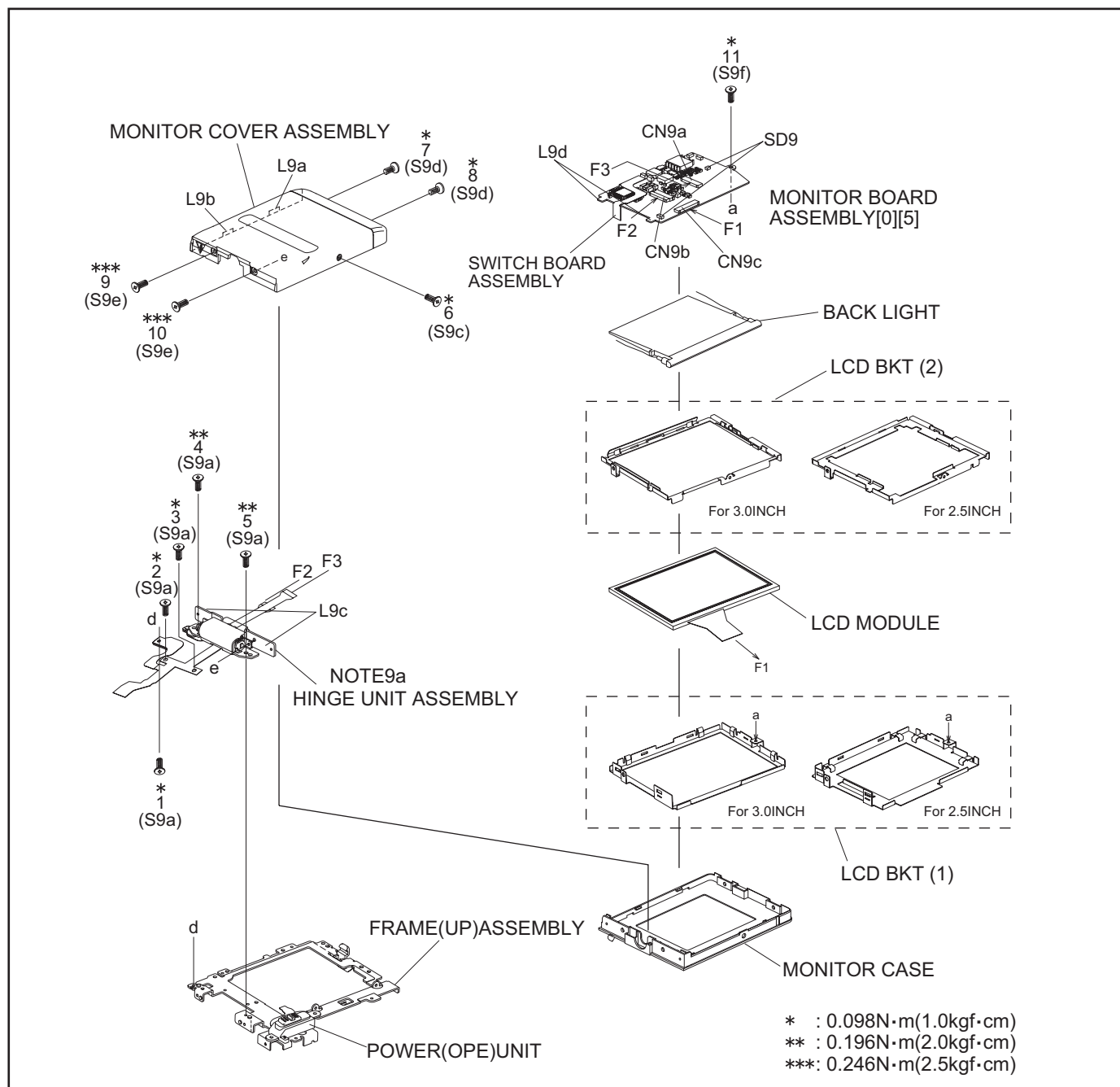


Fig.3-2-3

### 3.2.4 DISASSEMBLY of [12] VF ASSEMBLY

#### ●Disassembly

- (1) Remove the EYE CUP.

##### NOTE12a:

After the EYE CUP is removed, be careful of handling the EYE CUP since the SHEET (LENS) is removed.

##### NOTE12b:

In attaching the EYE CUP, be careful of the attachment direction of the SHEET (LENS).

- (2) Remove the three screws (1-3) and remove the HOLDER (EYE).
- (3) Remove one screw (4) and remove the BRACKET (TOP2).
- (4) Remove the two screws (5 and 6), lift the VF COVER in a direction of arrow, and remove the VF COVER from the ZOOM UNIT.
- (5) Remove the FPC from one connector (CN12a), remove one screw (7), and remove the ZOOM UNIT.
- (6) Remove the two screws (8 and 9), and remove the BRACKET.

- (7) Remove the FPC attached to the GUIDE (OUTER) little by little so that the FPC moves easily, and remove the COVER (VF) from the GUIDE (OUTER).

##### NOTE12c:

Be careful enough not to cut or damage the removed FPC since the FPC is attached again.

##### NOTE12d:

Disassemble the COVER (VF) if necessary. In an attachment procedure, confirm that the LEVER (1) moves smoothly.

- (8) Remove the two screws (10 and 11), and remove the FRAME ASSEMBLY.
- (9) Remove the SPACER (A), and remove the FPC from one connector (CN12b).
- (10) Remove the two screws (12 and 13), and remove the VF BOARD ASSEMBLY.

##### NOTE12e:

Disassemble the FRAME ASSEMBLY if necessary. In an assembly procedure, be careful not to insert foreign materials inside the VF and not to soil the VF.

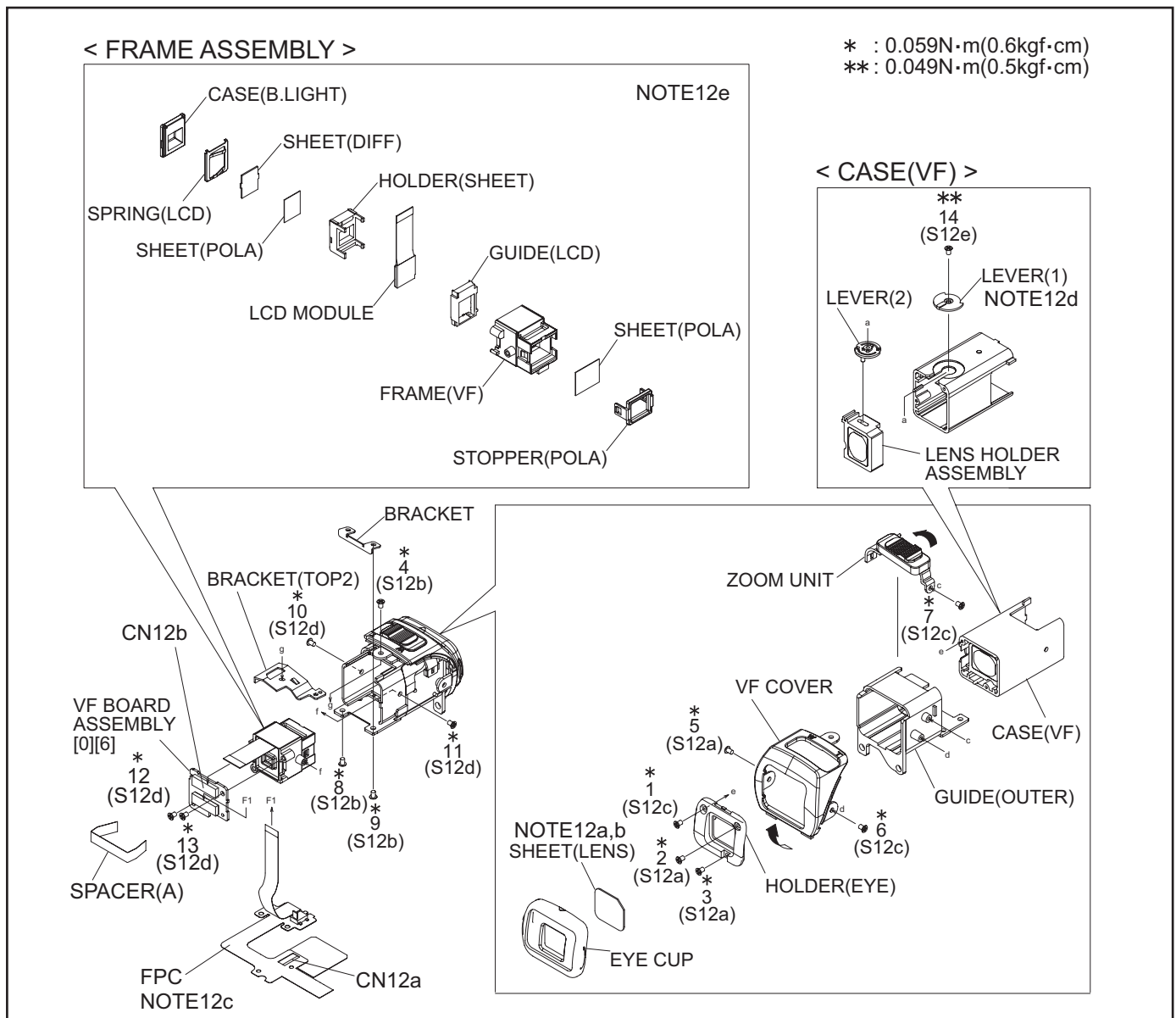


Fig.3-2-4

### 3.2.5 DISASSEMBLY of [13] OP BLOCK ASSEMBLY/CCD BOARD ASSEMBLY

#### ●CAUTIONS

- (1) Be careful in handling the CCD image sensor, OP LPF, and lens etc., especially not to damage or soil their surface.  
If it is soiled with fingerprints, etc., gently clean it with chamois or the cleaning cloth.
- (2) When the CCD image sensor is shipped from the factory, there are protection seals applied onto the transparent glass. Leave the protector as it is, and take it off just before assembling the CCD image sensor to the OP block.

#### ●Disassembly

- (1) Remove the two screws (1 and 2), and remove the CCD BOARD ASSEMBLY together with CCD BASE ASSEMBLY.
- (2) Remove the LOW PASS FILTER HOLDER from the CCD BASE ASSEMBLY, and remove the MASK.

#### NOTE 13a:

Since the MASK is between the LOW PASS FILTER HOLDER and CCD IMAGE SENSOR, be careful in handling the MASK.

#### NOTE13b:

In removing the CCD IMAGE SENSOR, unsolder the fourteen soldered parts (SD13a), and remove the CCD BASE ASSEMBLY from the CCD BOARD ASSEMBLY.

In replacing the CCD IMAGE SENSOR, don't remove the CCD IMAGE SENSOR from the CCD BASE ASSEMBLY. Instead, replace the whole CCD BASE ASSEMBLY.

#### NOTE13c:

Since the OP LPF is inside the LOW PASS FILTER HOLDER and the OP LPF is attached to the LOW PASS FILTER HOLDER by using the SHEET, remove the OP LPF from the LOW PASS FILTER HOLDER if necessary.

In removing the OP LPF from the LOW PASS FILTER HOLDER, be careful not to damage the LOW PASS FILTER HOLDER, and remove the SHEET carefully if you want to use the same SHEET in attachment procedure.

#### NOTE13d:

In removing the OP LPF, be careful of the direction of its attachment. Since one side of the OP LPF is coated for the purpose of protection, attach the OP LPF so that the coated side faces the OP lens (a subject of photograph).

#### ●Replacement of service repair parts

Service repair parts of the OP BLOCK ASSEMBLY are as follows.

When replacing the parts, be careful not to cut or damage the FPC, and not to damage the parts due to soldering (overheat).

- (1) FOCUS MOTOR
- (2) ZOOM MOTOR
- (3) IRIS MOTOR

#### NOTE 13e:

When replacing the FOCUS MOTOR or the ZOOM MOTOR, lift the FPC approx.1mm away from the jack in soldering the FPC (SD13b).

#### NOTE13f:

IRIS MOTOR contains the FPC ASSEMBLY and the SENSOR ×2.

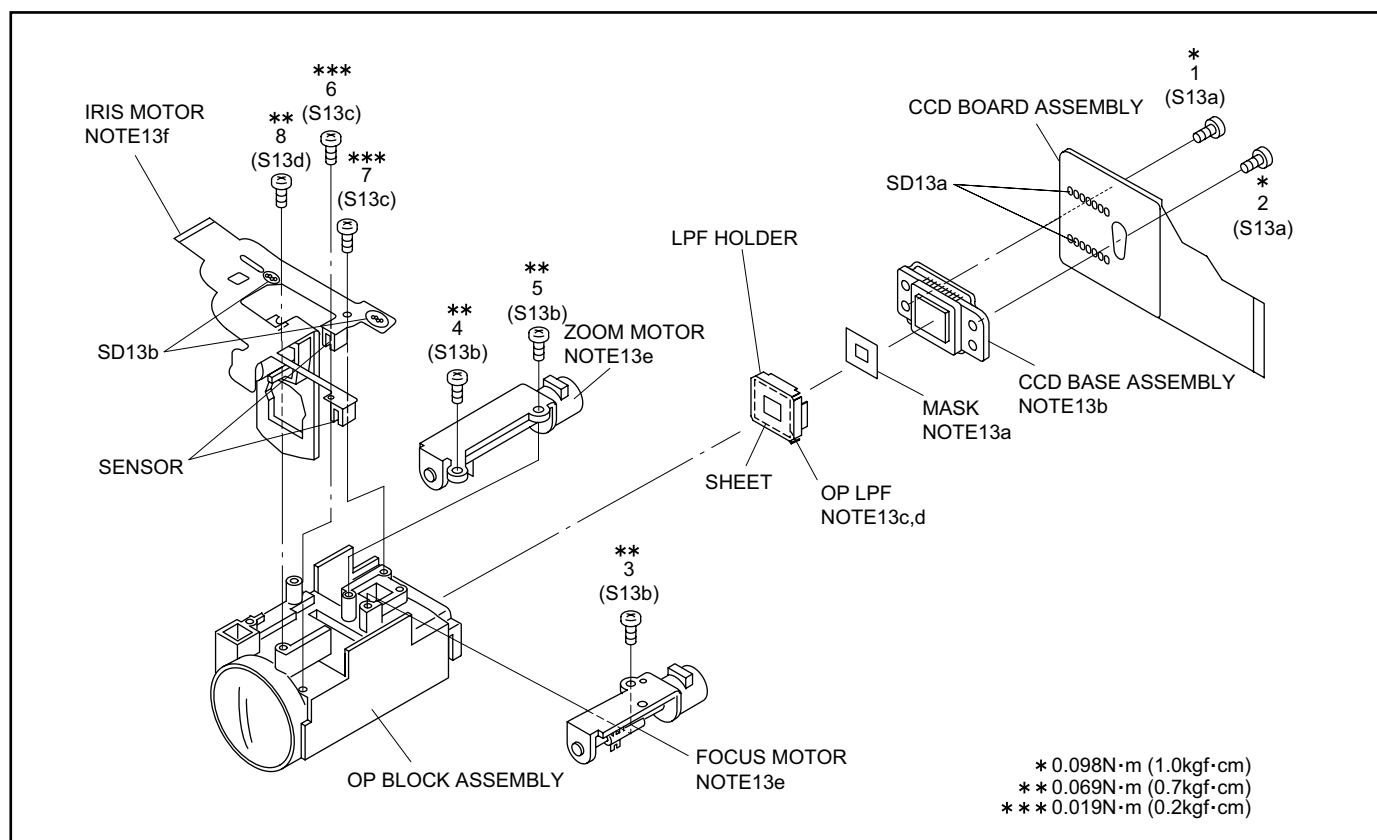


Fig.3-2-5

## SECTION 4 ADJUSTMENT

### 4.1 PREPARATION

#### 4.1.1 Precaution

Camera system and deck system of this model are specially adjusted by using PC.

However, if parts such as the following are replaced, an adjustment is required. The adjustment must be performed in a Service Center equipped with the concerned facilities.

- OP BLOCK ASSEMBLY
- EEP ROM (IC1005 of MAIN board)

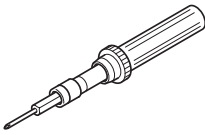
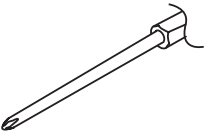
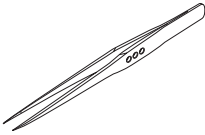
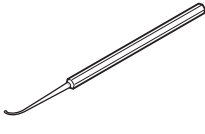
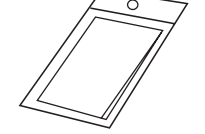
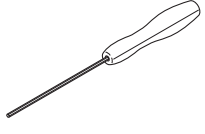
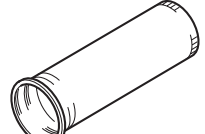
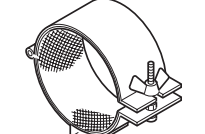
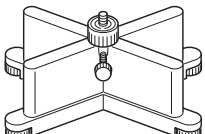
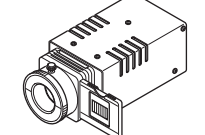
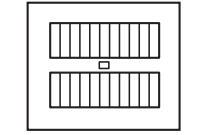
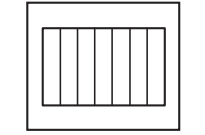
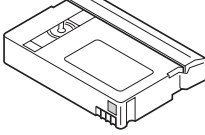
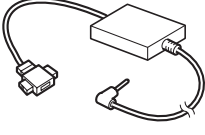
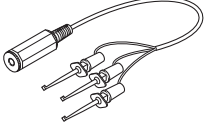
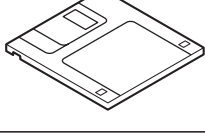
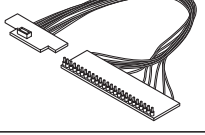
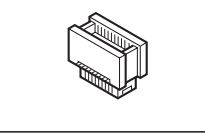
In the event of malfunction with electrical circuits, first find a defective portion with the aid of proper test instruments as shown in the following electrical adjustment procedure, and then commence necessary repair/ replacement/adjustment.

- In observing chip TP, use IC clips, etc. to avoid any stress. Prior to replacement of chip parts (especially IC), remove the solder completely to prevent peeling of the pattern.
- Use a patch cord if necessary. As for a patch cord, see the BOARD INTERCONNECTIONS.
- Since connectors are fragile, carefully handle them in disconnecting and connecting the FPC.

#### 4.1.2 REQUIRED TEST EQUIPMENT

- Personal computer (for Windows)
- Color TV monitor
- Oscilloscope (dual-trace type, observable 100MHz or higher frequency). The one observable 300 MHz or higher frequency is recommended.
- Digital voltmeter
- DC power supply or AC adapter
- Frequency counter (with threshold level adjuster)

### 4.1.3 TOOLS REQUIRED FOR ADJUSTMENT

|                                                                                      |                                                                                       |                                                                                       |
|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Torque Driver<br>YTU94088                                                            | Bit<br>YTU94088-003                                                                   | Tweezers<br>P-895                                                                     |
|    |    |    |
| Chip IC Replacement Jig<br>PTS40844-2                                                | Cleaning Cloth<br>KSM-01                                                              | Guide Driver (Hexagonal)<br>D-770-1.27                                                |
|    |    |    |
| INF Adjustment Lens<br>YTU92001B                                                     | INF Adjustment Lens Holder<br>YTU94087                                                | Camera Stand<br>YTU93079                                                              |
|    |    |    |
| Light box Assembly<br>YTU93096A                                                      | Gray Scale Chart<br>YTU94133A                                                         | Color Bar Chart<br>YTU94133C                                                          |
|   |   |   |
| Alignment Tape<br>MC-1                                                               | PC Cable<br>QAM0099-002                                                               | Communication Cable<br>YTU93107A                                                      |
|  |  |  |
| Service Support System<br>YTU94057-80                                                | Jig Connector Cable<br>YTU93106C                                                      | Extension Connector<br>YTU94145D-40                                                   |
|  |  |  |

#### • Torque driver

Be sure to use to fastening the mechanism and exterior parts because those parts must strictly be controlled for tightening torque.

#### • Bit

This bit is slightly longer than those set in conventional torque drivers.

#### • Tweezers

To be used for removing and installing parts and wires.

#### • Chip IC replacement jig

To be used for adjustment of the camera system.

#### • Cleaning cloth

Recommended the Cleaning cloth to wipe down the video heads, mechanism (tape transport system), optical lens surface.

- **Guide driver (Hexagonal)**

To be used to turn the guide roller to adjustment of the linearity of playback envelope.

- **INF adjustment lens**

To be used for adjustment of the camera system. For the usage of the INF adjustment lens, refer to the Service Bulletin No. YA-SB-10035.

- **INF lens holder**

To be used together with the Camera stand for operating the Videocamera in the stripped-down condition such as the status without the exterior parts or for using commodities that are not yet conformable to the interchangeable ring. For the usage of the INF lens holder, refer to the Service Bulletin No. YA-SB-10035.

- **Camera stand**

To be used together with the INF adjustment lens holder. For the usage of the Camera stand, refer to the Service Bulletin No. YA-SB-10035.

- **Light box assembly**

To be used for adjustment of the camera system. For the usage of the Light box assembly, refer to the Service Bulletin No. YA-SB-10035.

- **Gray scale chart**

To be used for adjustment of the camera system. For the usage of the INF adjustment lens, refer to the Service Bulletin No. YA-SB-10035.

- **Color bar chart**

To be used for adjustment of the camera system. For the usage of the INF adjustment lens, refer to the Service Bulletin No. YA-SB-10035.

- **Alignment tape**

To be used for check and adjustment of interchangeability of the mechanism.

- **PC cable**

To be used to connect the Videocamera and a personal computer with each other when a personal computer issued for adjustment.

- **Communication cable**

Connect the Communication cable between the PC cable and Jig connector cable when performing a PC adjustment.

- **Service support system**

To be used for adjustment with a personal computer. Software can be downloaded also from JS-net.

- **Jig connector cable**

Connected to JIG CONNECTOR of the main board and used for electrical adjustment, etc.

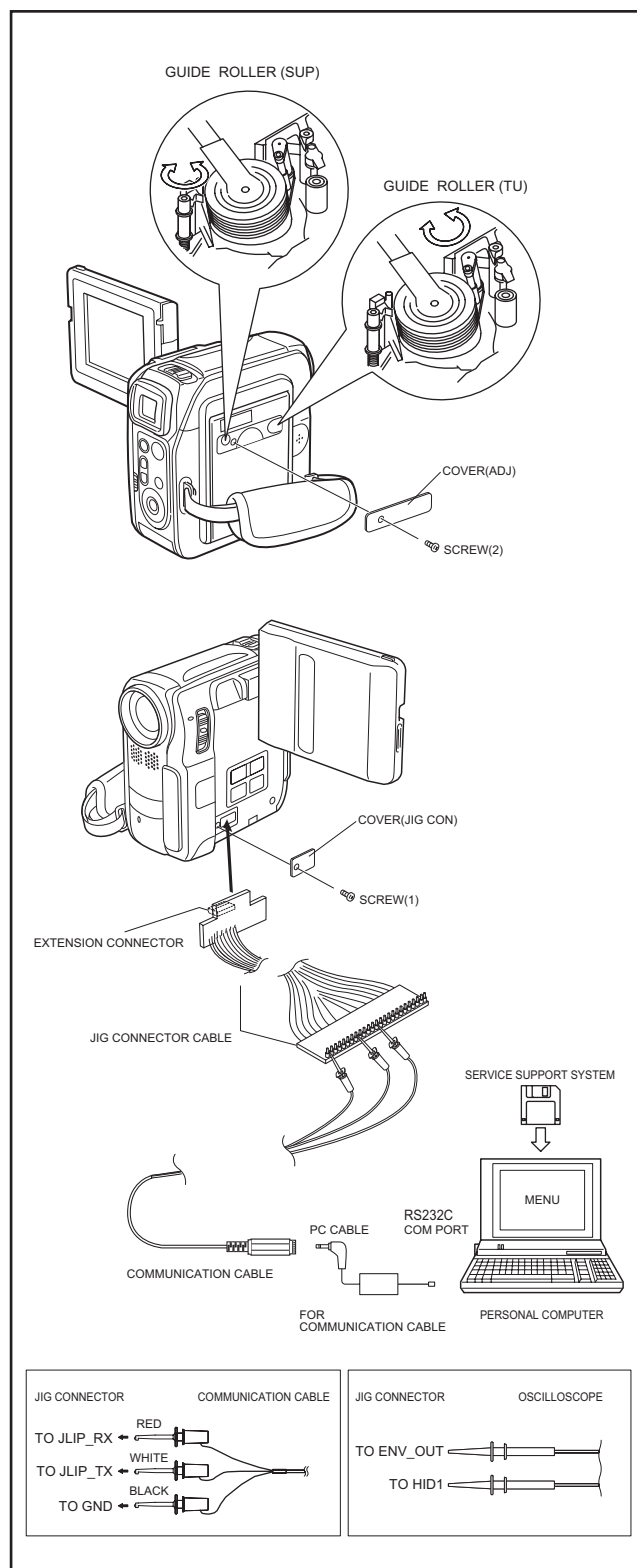
- **Extension connector**

Connect this extension connector to the connector of the Jig connector cable for extending the cable connector.

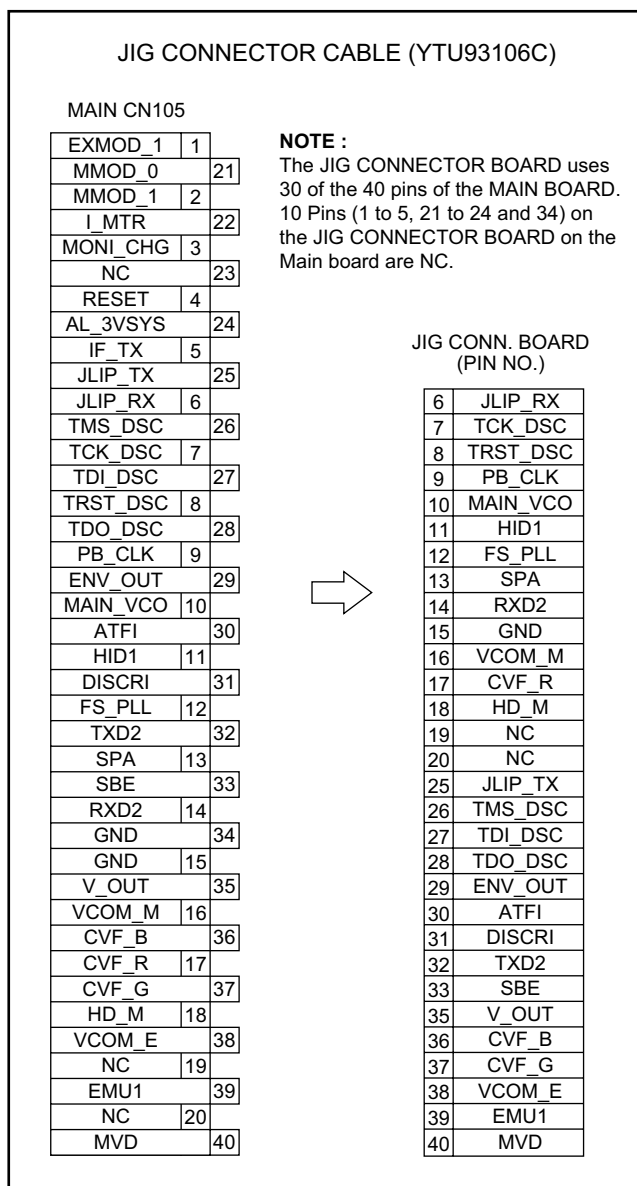
## 4.2 JIG CONNECTOR CABLE CONNECTION

- Remove one screw (1), and remove the COVER (JIG CON).
- As the figure shows, insert JIG CONNECTOR CABLE in JIG CONNECTOR by using the EXTENSION CONNECTOR so that the wire side faces downward.

### ■ Connection procedure



## ■ Jig connector diagrams



## 4.3 MECHANISM COMPATIBILITY ADJUSTMENT

### 4.3.1 Tape pattern adjustment

#### NOTE:

Prior to the adjustment, remove the COVER (ADJ).

- (1) Play back the compatibility adjustment tape.
- (2) While triggering the HID1, observe the waveform of ENV\_OUT.
- (3) Set the manual tracking mode (ATF OFF).
- (4) Confirm that the waveform is entirely parallel and straight, and free from remarkable level-down, through the tracking operation.  
Make the confirmation as follows if necessary.
- (5) If level-down is observed on the left hand side of the waveform, straighten the level by turning the GUIDE ROLLER (SUP).  
If level-down is observed on the right hand side of the waveform, straighten the level by turning the GUIDE ROLLER (TU).
- (6) After the adjustment, try the unloading motion once, and confirm that the waveform is flat when the tape has been played back again.
- (7) Play back the self-recording.
- (8) Confirm that the waveform is flat.

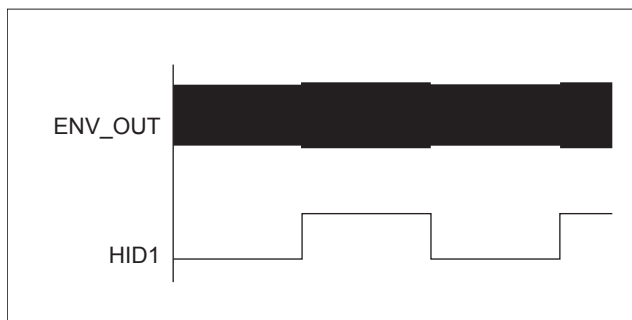


Fig.4-3-1

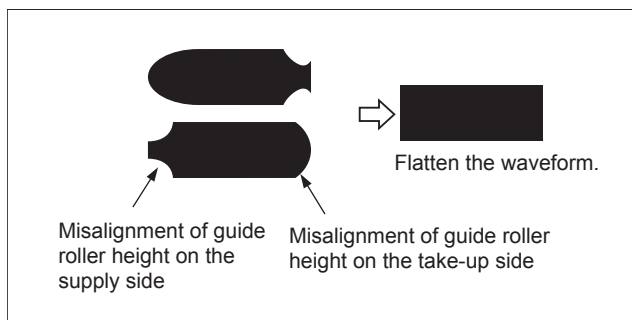


Fig.4-3-2

## 4.4 ELECTRICAL ADJUSTMENT

Electrical adjustment is performed by using a personal computer and software for SERVICE SUPPORT SYSTEM. Read README.TXT file to use the software properly.

As for the connection of cables, see "4.2 JIG CONNECTOR CABLE CONNECTION".

# SECTION 5 TROUBLE SHOOTING

## 5.1 SERVICE NOTE

### CABINET PARTS AND ELECTRICAL PARTS

| Symbol No.                  | [1] | [2] | [3] | [4] | [5] |
|-----------------------------|-----|-----|-----|-----|-----|
| Removing order of screw     | 1   | 2   | 3   | 4   | 5   |
| Place to stick screw        | *   | *   | *   | *   | *   |
| Reference drawing (Fig.No.) | C1  | C2  | C3  | C4  | C5  |
| Screw tightening torque     | I   |     |     |     | II  |

### CABINET PARTS AND ELECTRICAL PARTS

| Symbol No.                  | [6] | [7] | [8] | [9] | [10] | [11] |
|-----------------------------|-----|-----|-----|-----|------|------|
| Removing order of screw     | 25  | 26  | 27  | 28  | 29   | 30   |
| Place to stick screw        | *   | *   | *   | *   | *    | *    |
| Reference drawing (Fig.No.) | C5  | C6  | C7  | C8  | C9   | C10  |
| Screw tightening torque     | I   |     |     |     |      | II   |

### CABINET PARTS AND ELECTRICAL PARTS

| Symbol No.                  | [12] | [13] | [14] | [15] | [16] |
|-----------------------------|------|------|------|------|------|
| Removing order of screw     | 46   | 47   | 48   | 49   | 50   |
| Place to stick screw        | *    | *    | *    | *    | *    |
| Reference drawing (Fig.No.) | C9   | C10  | C11  | C12  | C13  |
| Screw tightening torque     | I    |      |      |      | II   |

### [9] MONITOR ASSEMBLY

| Removing order of screw     | 1     | 2 | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 |
|-----------------------------|-------|---|----|----|----|----|----|----|----|----|----|
| Place to stick screw        | *     | * | *  | *  | *  | *  | *  | *  | *  | *  | *  |
| Reference drawing (Fig.No.) | 3-2-3 |   |    |    |    |    |    |    |    |    |    |
| Screw tightening torque     | IV    | V | VI | IV | VI | IV | VI | IV | VI | IV | VI |

### [12] VF ASSEMBLY

| Removing order of screw     | 1     | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|-----------------------------|-------|---|---|---|---|---|---|---|---|----|----|----|----|----|
| Place to stick screw        | *     | * | * | * | * | * | * | * | * | *  | *  | *  | *  | *  |
| Reference drawing (Fig.No.) | 3-2-4 |   |   |   |   |   |   |   |   |    |    |    |    |    |
| Screw tightening torque     | VIII  |   |   |   |   |   |   |   |   |    |    |    |    |    |

| [13] OP BLOCK ASSEMBLY / CCD BOARD ASSEMBLY | 1     | 2   | 3   | 4   | 5   | 6   | 7   | 8   |
|---------------------------------------------|-------|-----|-----|-----|-----|-----|-----|-----|
|                                             | *     | *   | *   | *   | *   | *   | *   | *   |
|                                             | 3-2-5 |     |     |     |     |     |     |     |
|                                             | IV    | III | III | III | III | III | III | VII |

### NOTE:

- \* : Don't reuse the screw, because screw lock bond was applied to them.
- Pay careful attention to tightening torque for each screw.

|     |                        |      |                        |
|-----|------------------------|------|------------------------|
| I   | : 0.088N·m (0.9kgf·cm) | II   | : 0.078N·m (0.8kgf·cm) |
| IV  | : 0.098N·m (1.0kgf·cm) | V    | : 0.196N·m (2.0kgf·cm) |
| VII | : 0.019N·m (0.2kgf·cm) | VIII | : 0.059N·m (0.6kgf·cm) |
| III | : 0.069N·m (0.7kgf·cm) | VI   | : 0.246N·m (2.5kgf·cm) |
| IX  | : 0.049N·m (0.5kgf·cm) |      |                        |

## 5.2 TAKE OUT CASSETTE TAPE

The following procedure is a method for taking out the cassette tape in case the cassette tape cannot be ejected due to an electrical failure. The following procedure is a simplified method; therefore, for more reliable operation, it is recommended that you should remove exterior parts so that you can take out the tape without excessive force.

- (1) Remove the Power Unit (battery or DC cord) from the set.
- (2) Open the CASSETTE COVER till it is completely opened and fixed.
- (3) Attach a PVC tape as shown in the figure.

### NOTE:

Be careful of cassette tape damage caused because the Cassette Housing Assembly is moved upward at the unloading end (Eject mode).

- (4) To set the Slide Deck Assembly to the unloading end, apply DC 3V to the electrode (terminal) on the top surface of the LOADING MOTOR that is seen through a space of VF side.

### NOTE:

Be careful not to attach grease or a similar substance to the surface of the cassette tape on the tape transport system.

- (5) Wind the cassette tape by directly turning the Reel Disk Assembly (SUP) from the backside of the SLIDE DECK ASSEMBLY by using a sharp tool (Chip IC replacement tool).
- (6) Confirm that the cassette tape is completely wound, and then peel off the PVC tape from the CASSETTE HOUSING ASSEMBLY and take out the cassette tape.

### NOTE:

To confirm that the cassette tape is completely wound, confirm that one REEL DISK ASSEMBLY (TU) rotates as you rotate the other REEL DISK ASSEMBLY (SUP).

- (7) Make sure that grease or a similar substance is not attached to the surface of the tape taken out in the procedure (6). Similarly, also make sure that grease or a similar substance is not attached on the MECHANISM ASSEMBLY, especially the tape transport system.

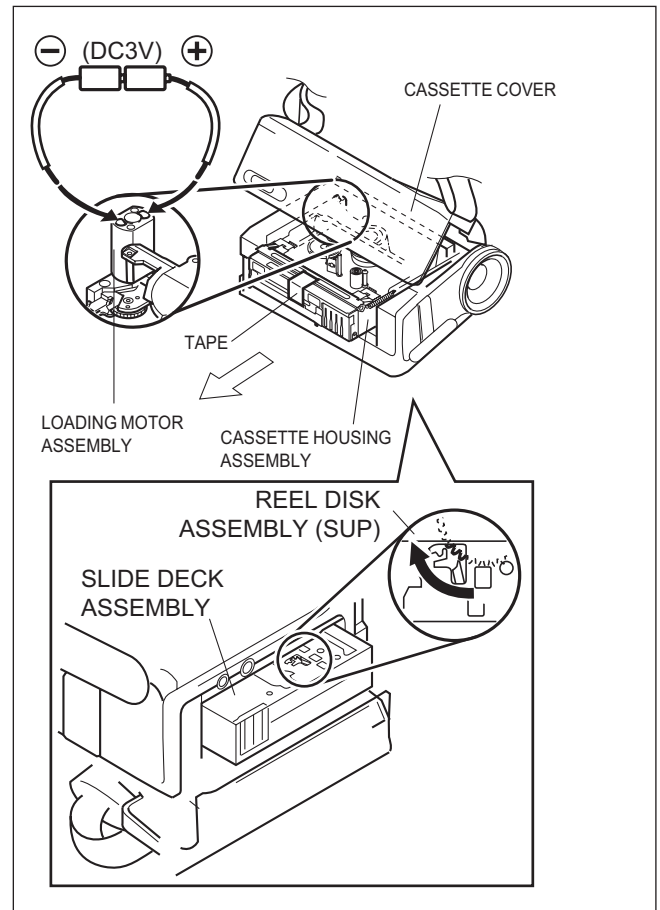


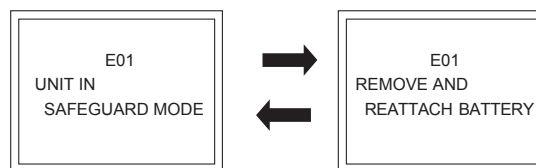
Fig.5-2-1

### 5.3 EMERGENCY DISPLAY

Whenever some abnormal signal is input to the syscon CPU, an error number (E01, as an example) is displayed on the LCD monitor or (in the electronic view finder). In every error status, such the message as shown below alter nately appear over and over.

- In an emergency mode, all operations except turning on/off the POWER switch are ineffectual.

**Example (in case of the error number E01):**



| LCD display | Emergency mode   | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Possible cause                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |           |          |        |       |       |       |       |         |       |         |       |    |       |         |     |         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-------------|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|----------|--------|-------|-------|-------|-------|---------|-------|---------|-------|----|-------|---------|-----|---------|-------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| E01         | LOADING          | In the case the encoder position is not shifted to the next point though the loading motor has rotated in the loading direction for 4 seconds or more. This error is defined as [E01].                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1. The mechanism is locked during mode shift.<br>2. The mechanism is locked at the mechanism loading end, because the encoder position is skipped during mechanism mode shift.<br>3. No power is supplied to the loading MDA.                                                                                                                                                                                                                                                                      |           |          |        |       |       |       |       |         |       |         |       |    |       |         |     |         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| E02         | UNLOADING        | In the case the encoder position is not shifted to the next point though the loading motor has rotated in the unloading direction for 4 seconds or more. This error is defined as [E02].                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 1. The mechanism is locked during mode shift.<br>2. The mechanism is locked at the mechanism loading end, because the encoder position is skipped during mechanism mode shift.                                                                                                                                                                                                                                                                                                                     |           |          |        |       |       |       |       |         |       |         |       |    |       |         |     |         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| E03         | TU & SUP REEL FG | <div>In the case no REEL FG is produced for seconds shown in the table below or more in the capstan rotation mode after loading was complete, the mechanism mode is shifted to STOP with the pinch roller set off. This error is defined as [E03]. However, no REEL EMG is detected in the SLW/STILL mode.</div> <table><tr><td></td><td>REEL(SUP)</td><td>REEL(TU)</td></tr><tr><td>PB/REC</td><td>3 SEC</td><td>3 SEC</td></tr><tr><td>S-FWD</td><td>3 SEC</td><td>0.3 SEC</td></tr><tr><td>S-REW</td><td>0.3 SEC</td><td>3 SEC</td></tr><tr><td>FF</td><td>3 SEC</td><td>0.1 SEC</td></tr><tr><td>REW</td><td>0.1 SEC</td><td>3 SEC</td></tr></table> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | REEL(SUP) | REEL(TU) | PB/REC | 3 SEC | 3 SEC | S-FWD | 3 SEC | 0.3 SEC | S-REW | 0.3 SEC | 3 SEC | FF | 3 SEC | 0.1 SEC | REW | 0.1 SEC | 3 SEC | 1. The idler gear does not engage with the reel disk well.<br>2. Though the idler gear and reel disk are engaged with each other, the tape is not wound because of overload to the mechanism.<br>3. No FG pulse is output from the reel sensor.<br>4. No power is supplied to the reel sensor.<br>5. Tape transport operation takes place with a cassette having no tape inside.<br>6. The tape slackens and no pulse is produced until the slack is taken up and the tape comes into the normal status. |
|             | REEL(SUP)        | REEL(TU)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |           |          |        |       |       |       |       |         |       |         |       |    |       |         |     |         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| PB/REC      | 3 SEC            | 3 SEC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |           |          |        |       |       |       |       |         |       |         |       |    |       |         |     |         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| S-FWD       | 3 SEC            | 0.3 SEC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |           |          |        |       |       |       |       |         |       |         |       |    |       |         |     |         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| S-REW       | 0.3 SEC          | 3 SEC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |           |          |        |       |       |       |       |         |       |         |       |    |       |         |     |         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| FF          | 3 SEC            | 0.1 SEC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |           |          |        |       |       |       |       |         |       |         |       |    |       |         |     |         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| REW         | 0.1 SEC          | 3 SEC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |           |          |        |       |       |       |       |         |       |         |       |    |       |         |     |         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| E04         | DRUM FG          | In the case there is no DRUM FG input in the drum rotation mode for 4 seconds or more. This error is defined as [E04], and the mechanism mode is shifted to STOP with the pinch roller set off.                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 1. The drum cannot be started or drum rotation is stopped because tape transport load is too high.<br>1) Tape tension is extremely high.<br>2) The tape is damaged or soiled with grease, etc.<br>2. The DRUM FG signal is not received by the syscon CPU.<br>1) Disconnection in the middle of the signal line.<br>2) Failure of the DRUM FG pulse generator (hall element).<br>3. No drum control voltage is supplied to the MDA.<br>4. No power is supplied to the DRUM MDA.                    |           |          |        |       |       |       |       |         |       |         |       |    |       |         |     |         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| E05         | -                | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |           |          |        |       |       |       |       |         |       |         |       |    |       |         |     |         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| E06         | CAPSTAN FG       | In the case no CAPSTAN FG is produced in the capstan rotation mode for 2 seconds or more. This error is defined as [E06], and the mechanism mode is shifted to STOP with the pinch roller set off. However, no CAPSTAN EMG is detected in the STILL/FF/REW mode.                                                                                                                                                                                                                                                                                                                                                                                         | 1. The CAPSTAN FG signal is not received by the syscon CPU.<br>1) Disconnection in the middle of the signal line.<br>2) Failure of the CAPSTAN FG pulse generator (MR element).<br>2. No capstan control voltage is supplied to the MDA.<br>3. The capstan cannot be started or capstan rotation is stopped because tape transport load is too high.<br>1) Tape tension is extremely high. (Mechanical locking)<br>2) The tape is damaged or soiled with grease, etc. (Tape tangling occurs, etc.) |           |          |        |       |       |       |       |         |       |         |       |    |       |         |     |         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

Fig.5-3-1



**JVC SERVICE & ENGINEERING COMPANY OF AMERICA**  
**DIVISION OF JVC AMERICAS CORP.**

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**JVC CANADA INC.**

**Head office** : 21 Finchdene Square Scarborough, Ontario M1X 1A7

(416)293-1311

**JVC®**

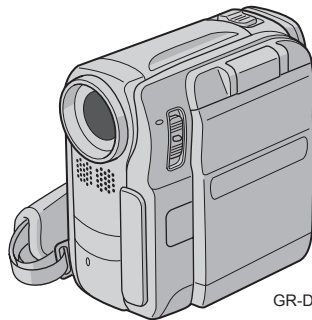
# JVC

## SCHEMATIC DIAGRAMS

DIGITAL VIDEO CAMERA

### GR-DX77US, GR-DX97US

CD-ROM No.SML200403



Mini **DV** NTSC  
**DSC**  
DIGITAL  
STILL CAMERA

GR-DX77US[M4D3S7], GR-DX97US[M4D3M7]

For disassembling and assembling of MECHANISM ASSEMBLY, refer to the SERVICE MANUAL No.86700(MECHANISM ASSEMBLY).

# CHARTS AND DIAGRAMS

## NOTES OF SCHEMATIC DIAGRAM

### Safety precautions

The Components identified by the symbol  are critical for safety. For continued safety, replace safety critical components only with manufacturer's recommended parts.

### 1. Units of components on the schematic diagram

Unless otherwise specified.

1) All resistance values are in ohm. 1/6 W, 1/8 W (refer to parts list).

Chip resistors are 1/16 W.

K: K (1000 ), M: M (1000K )

2) All capacitance values are in  $\mu\text{F}$ , (P: PF).

3) All inductance values are in  $\mu\text{H}$ , (m: mH).

4) All diodes are 1SS133, MA165 or 1N4148M (refer to parts list).

**Note:** The Parts Number, value and rated voltage etc. in the Schematic Diagram are for references only. When replacing the parts, refer to the Parts List.

### 2. Indications of control voltage

AUX : Active at high.

$\overline{\text{AUX}}$  or AUX(L) : Active at low.

### 3. Interpreting Connector indications



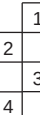
Removable connector



Wire soldered directly on board



Non-removable Board connector



Board to Board



Connected pattern on board  
The arrows indicate signal path

**Note:** For the destination of each signal and further line connections that are cut off from the diagram, refer to "BOARD INTERCONNECTIONS"

### 4. Voltage measurement

1) Regulator (DC/DC CONV) circuits

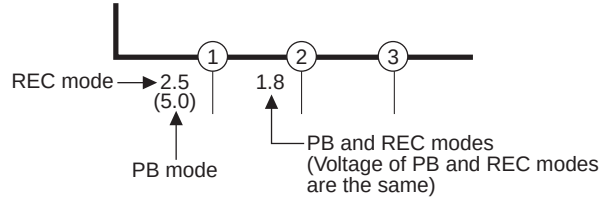
REC : Colour bar signal.

PB : Alignment tape (Colour bar).

— : Unmeasurable or unnecessary to measure.

2) Indication on schematic diagram

Voltage Indications for REC and PB mode on the schematic diagram are as shown below.



**Note:** If the voltages are not indicated on the schematic diagram, refer to the voltage charts.

### 5. Signal path Symbols

The arrows indicate the signal path as follows.

**NOTE :** The arrow is DVC unique object.



Playback signal path



Playback and recording signal path



Recording signal path  
(including E-E signal path)



Capstan servo path



Drum servo path

(Example)



R-Y Playback R-Y signal path



Y Recording Y signal path

### 6. Indication of the parts for adjustments

The parts for the adjustments are surrounded with the circle as shown below.



### 7. Indication of the parts not mounted on the circuit board

"OPEN" is indicated by the parts not mounted on the circuit board.



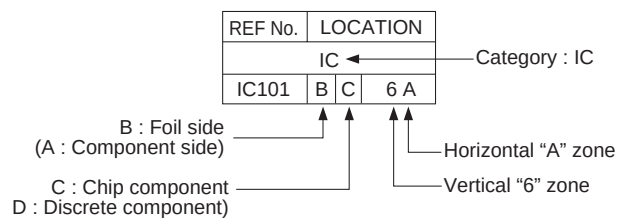
## CIRCUIT BOARD NOTES

### 1. Foil and Component sides

- 1) Foil side (B side) :  
Parts on the foil side seen from foil face (pattern face) are indicated.
- 2) Component side (A side) :  
Parts on the component side seen from component face (parts face) indicated.

### 2. Parts location guides

Parts location are indicated by guide scale on the circuit board.

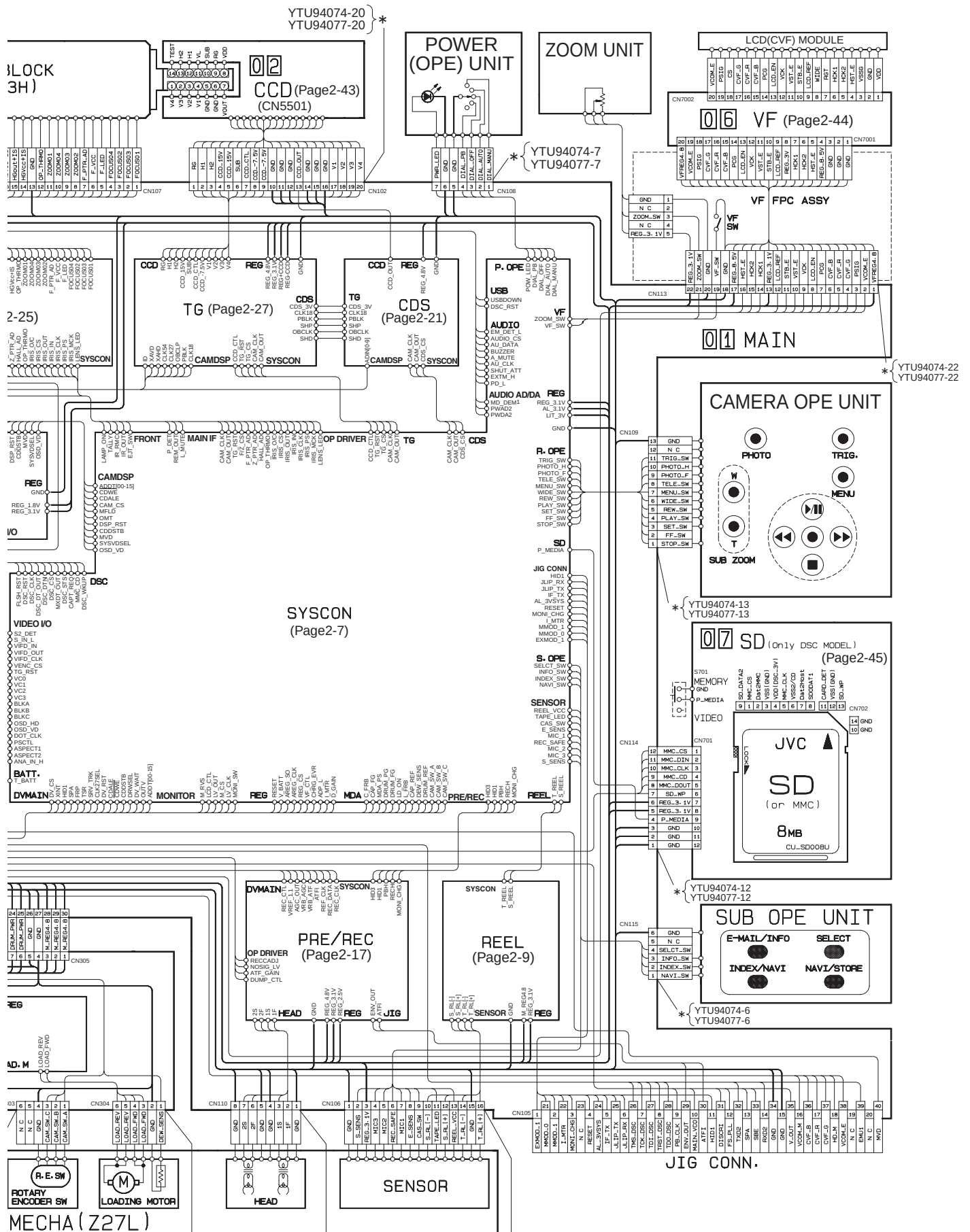


**Note:** For general information in service manual, please refer to the Service Manual of GENERAL INFORMATION Edition 4 No. 82054D (January 1994).

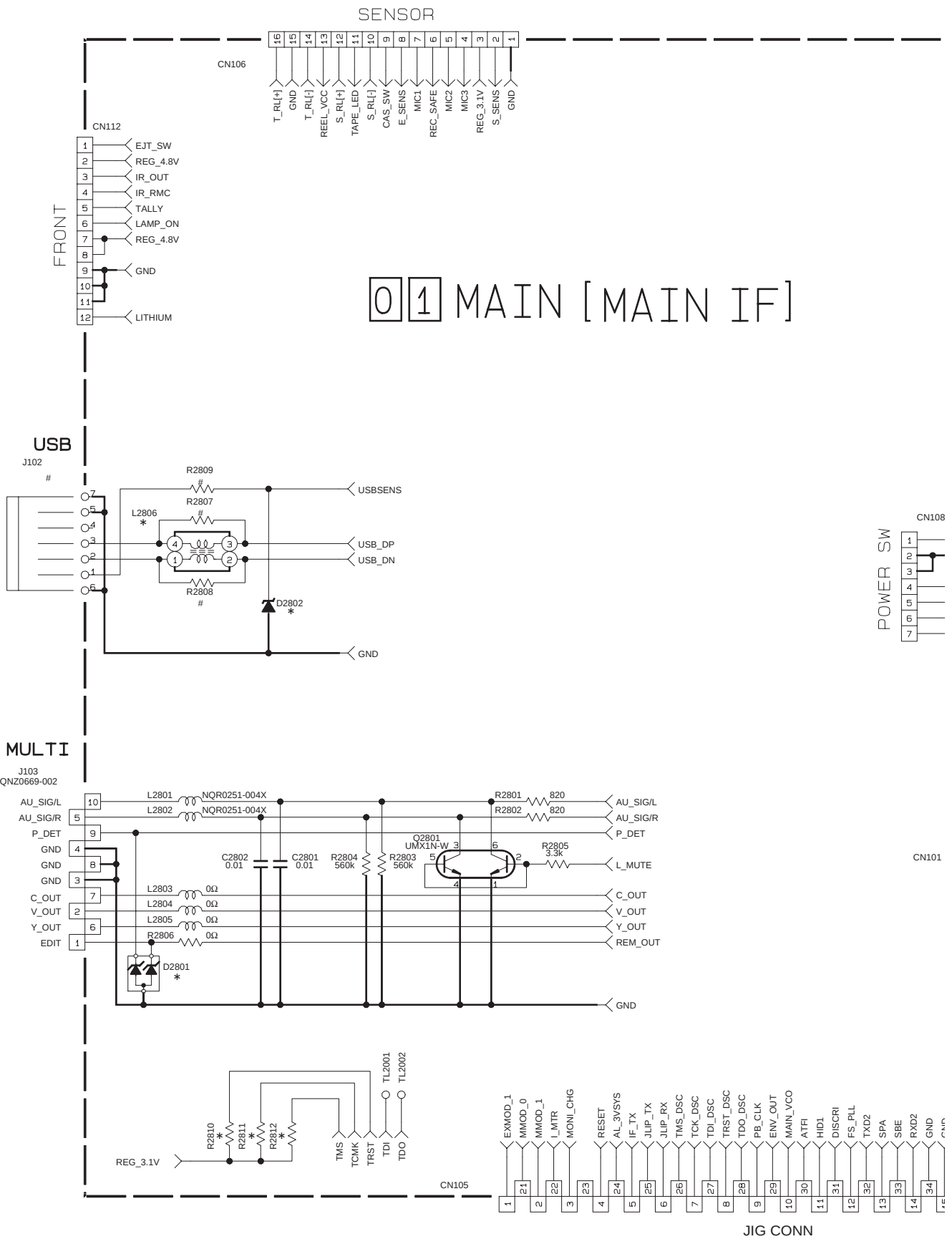
YTU94074-28 }  
YTU94077-28 } \*



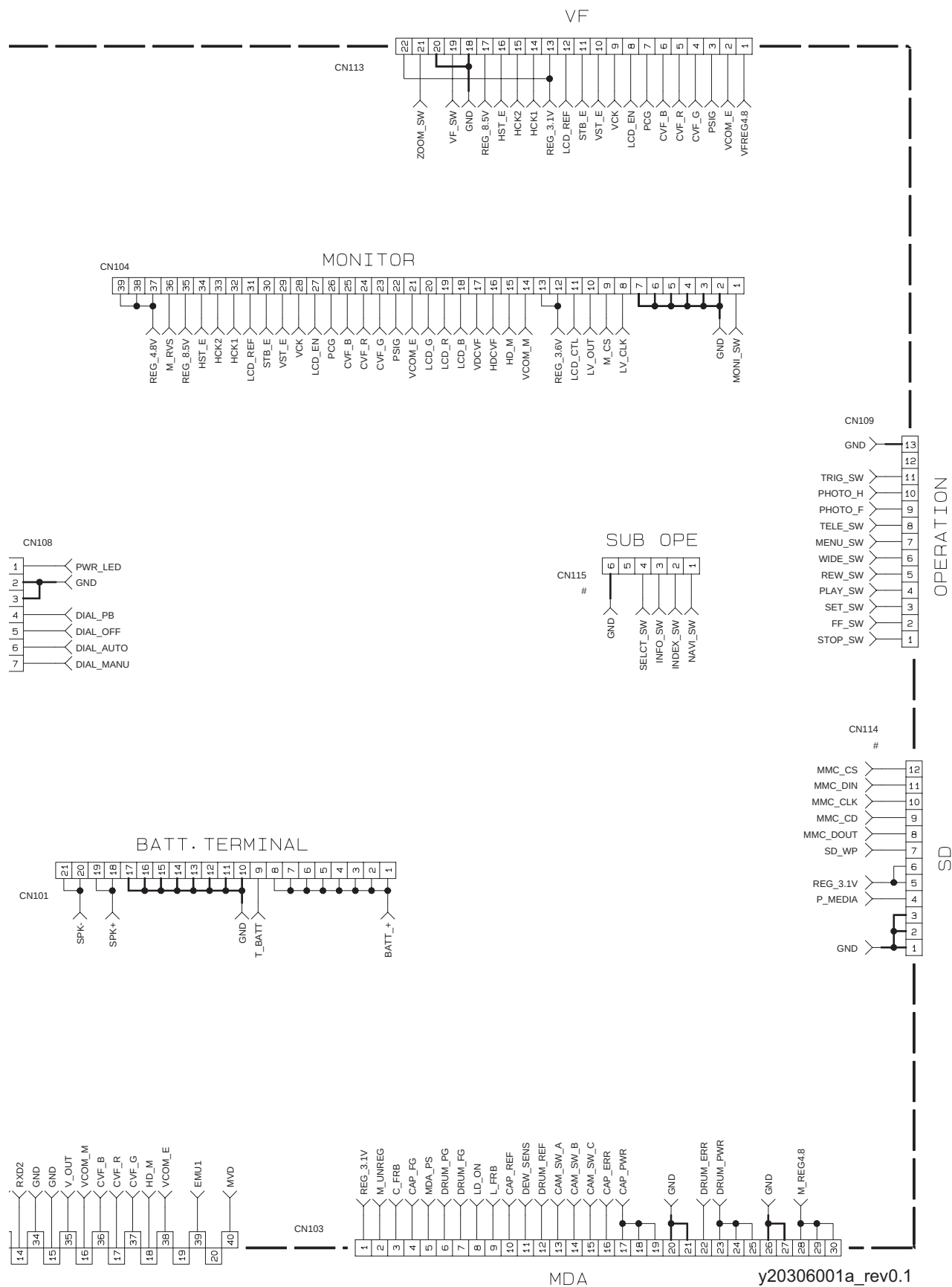
\* { YTU940  
YTU940



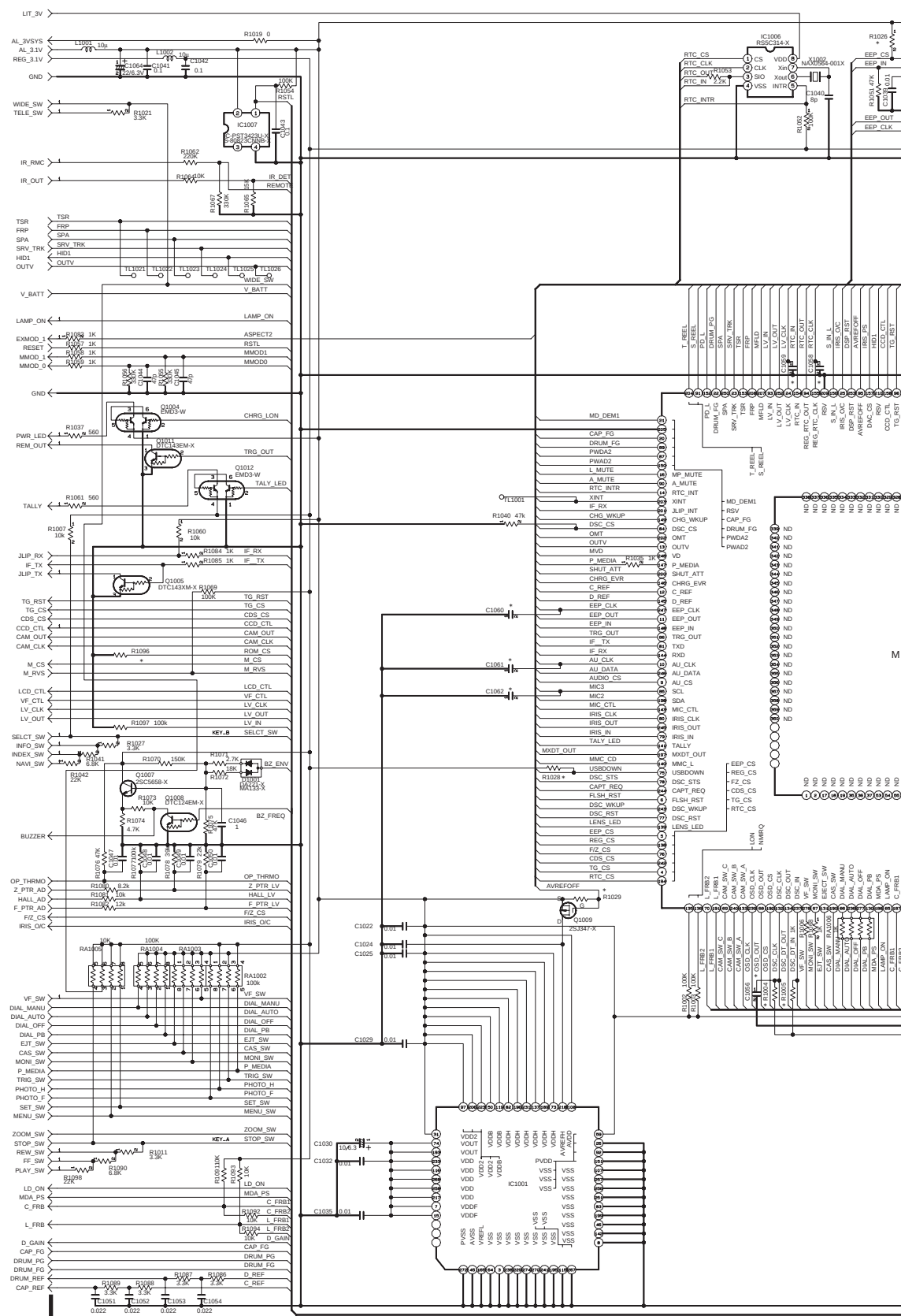
# ■ MAIN(MAIN IF) SCHEMATIC DIAGRAM



NOTE : The parts with marked (\*) is not used.

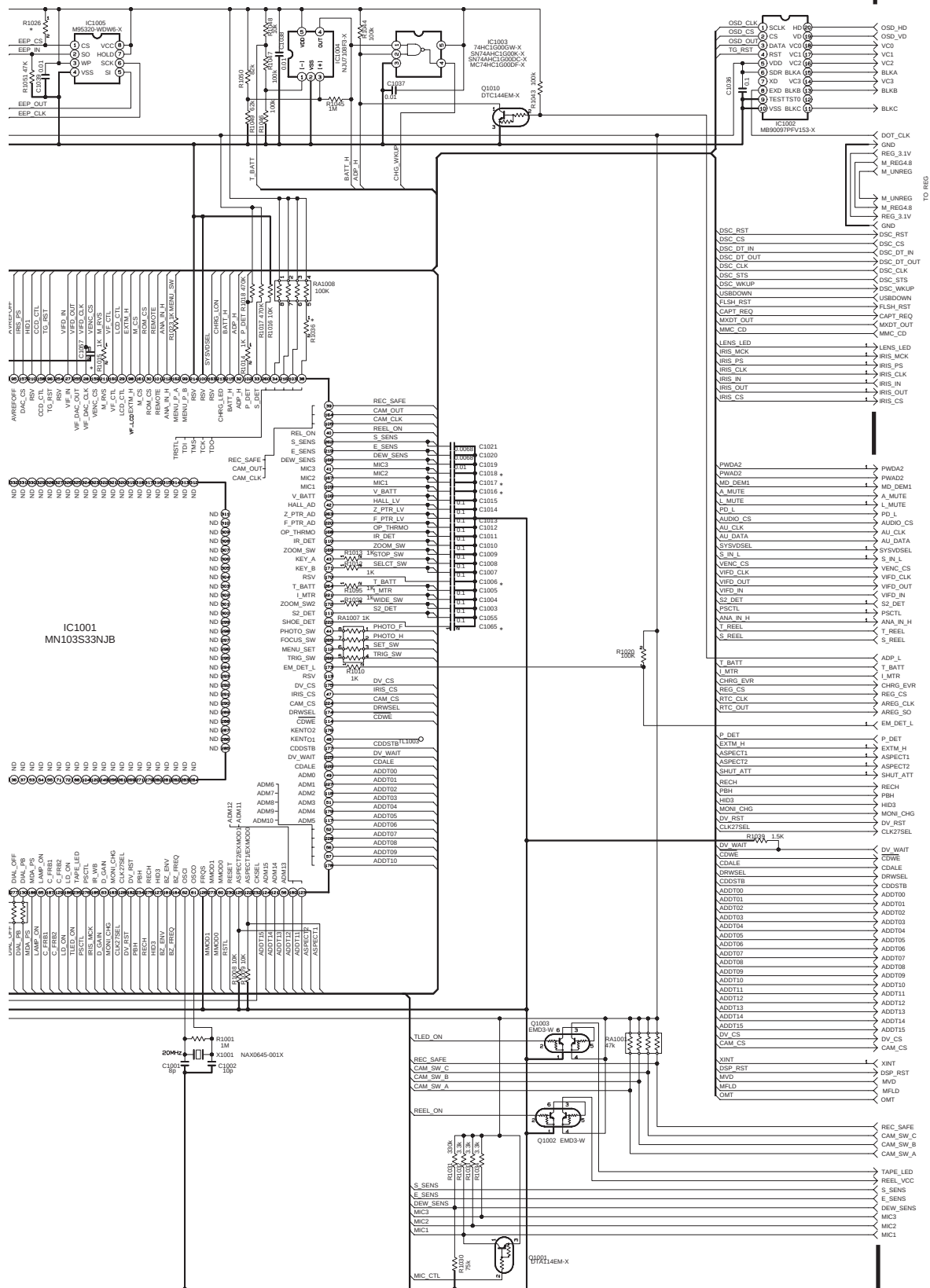


### ■ MAIN(SYS CON) SCHEMATIC DIAGRAM



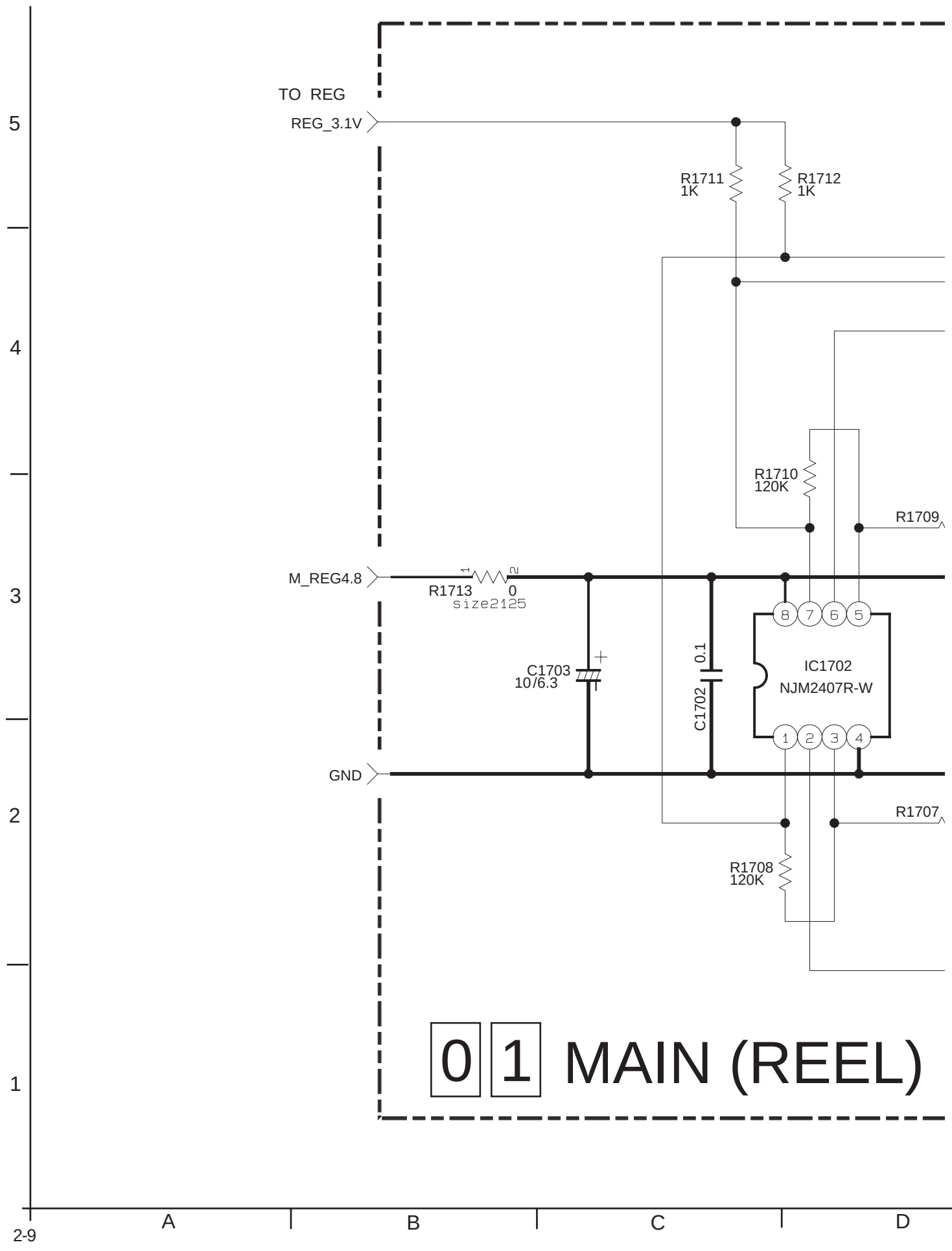
NOTE : The parts with marked (\*) is not used.

01

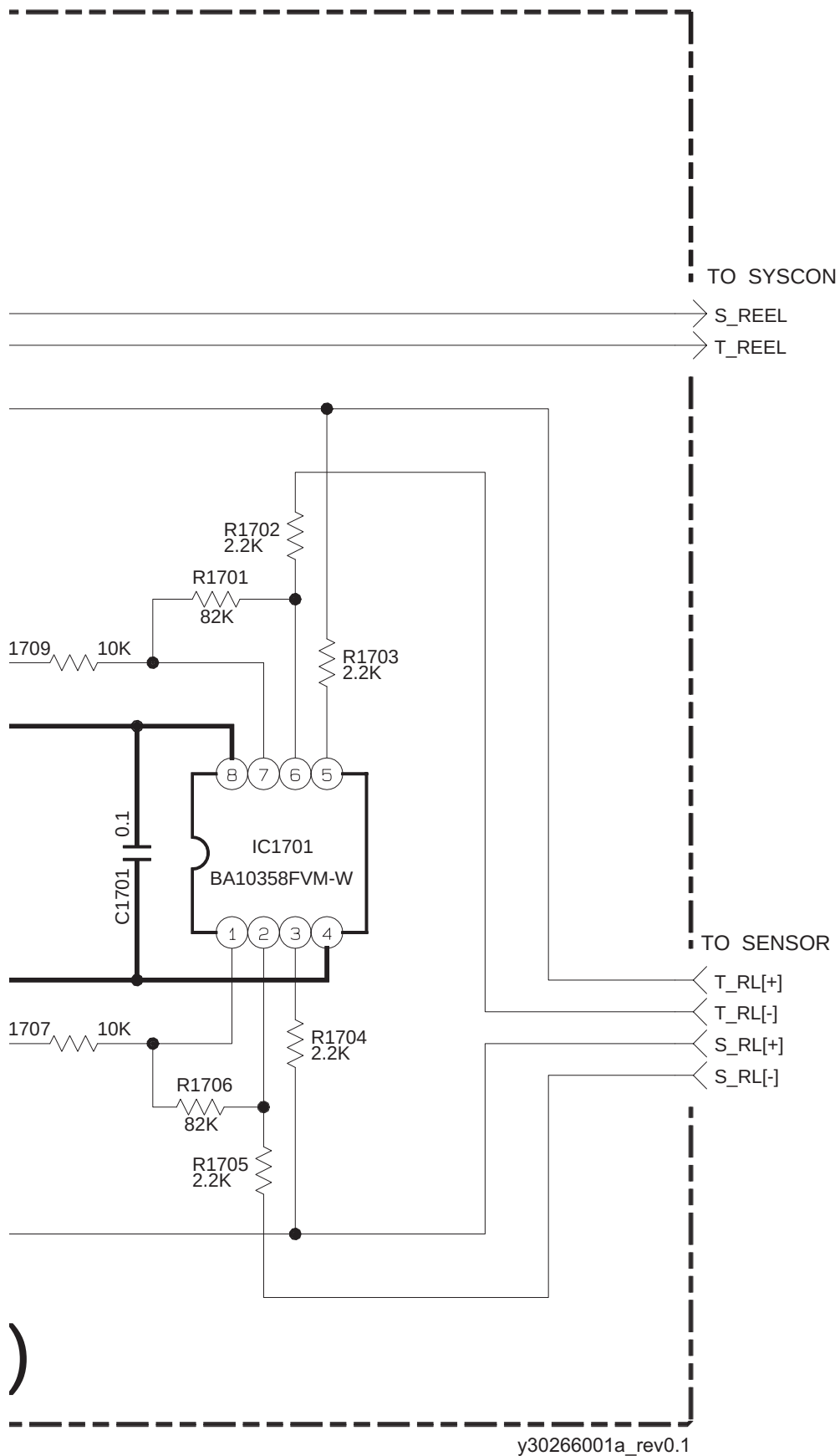


y10431001a\_rev0.1

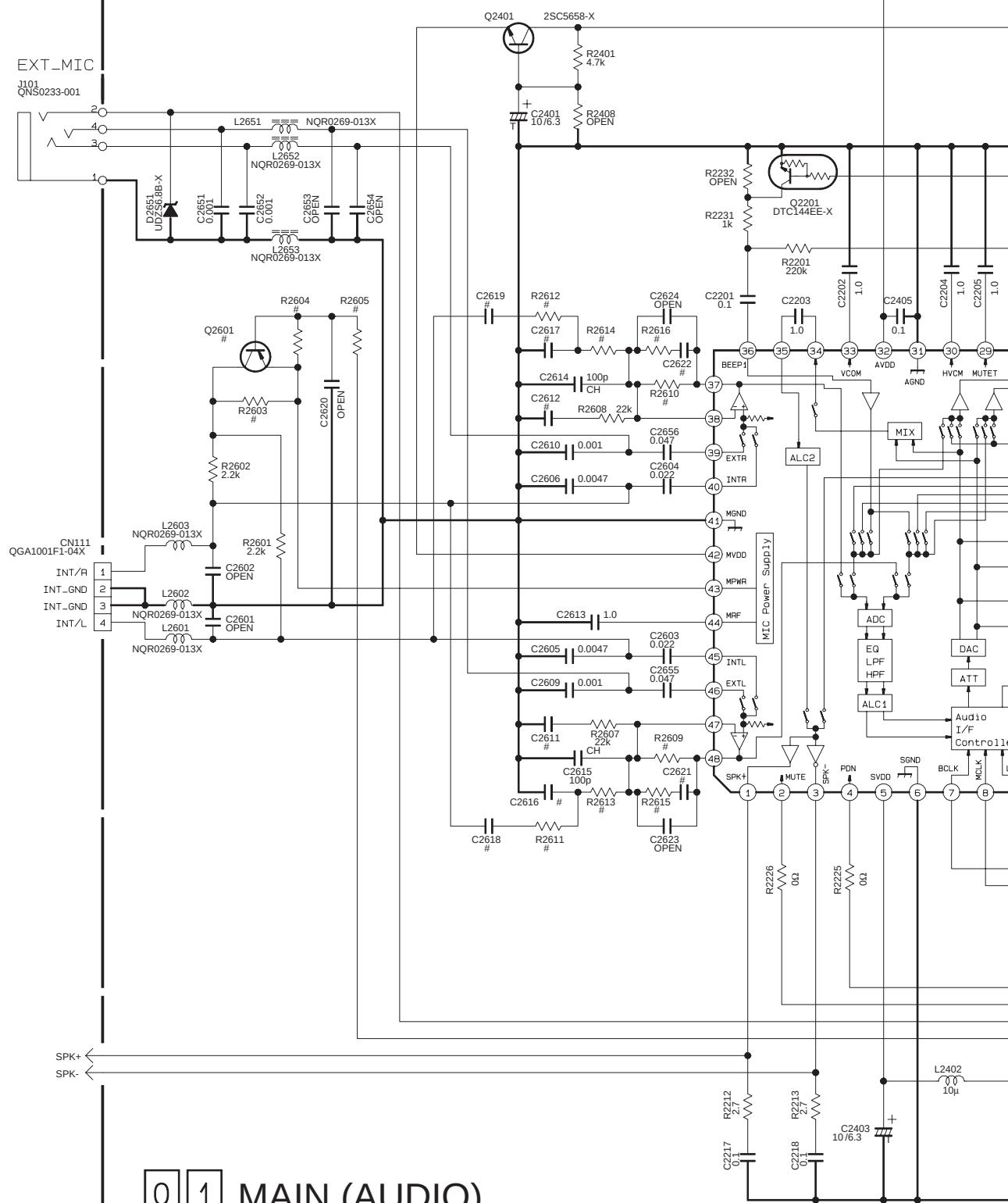
■ MAIN(REEL) SCHEMATIC DIAGRAM



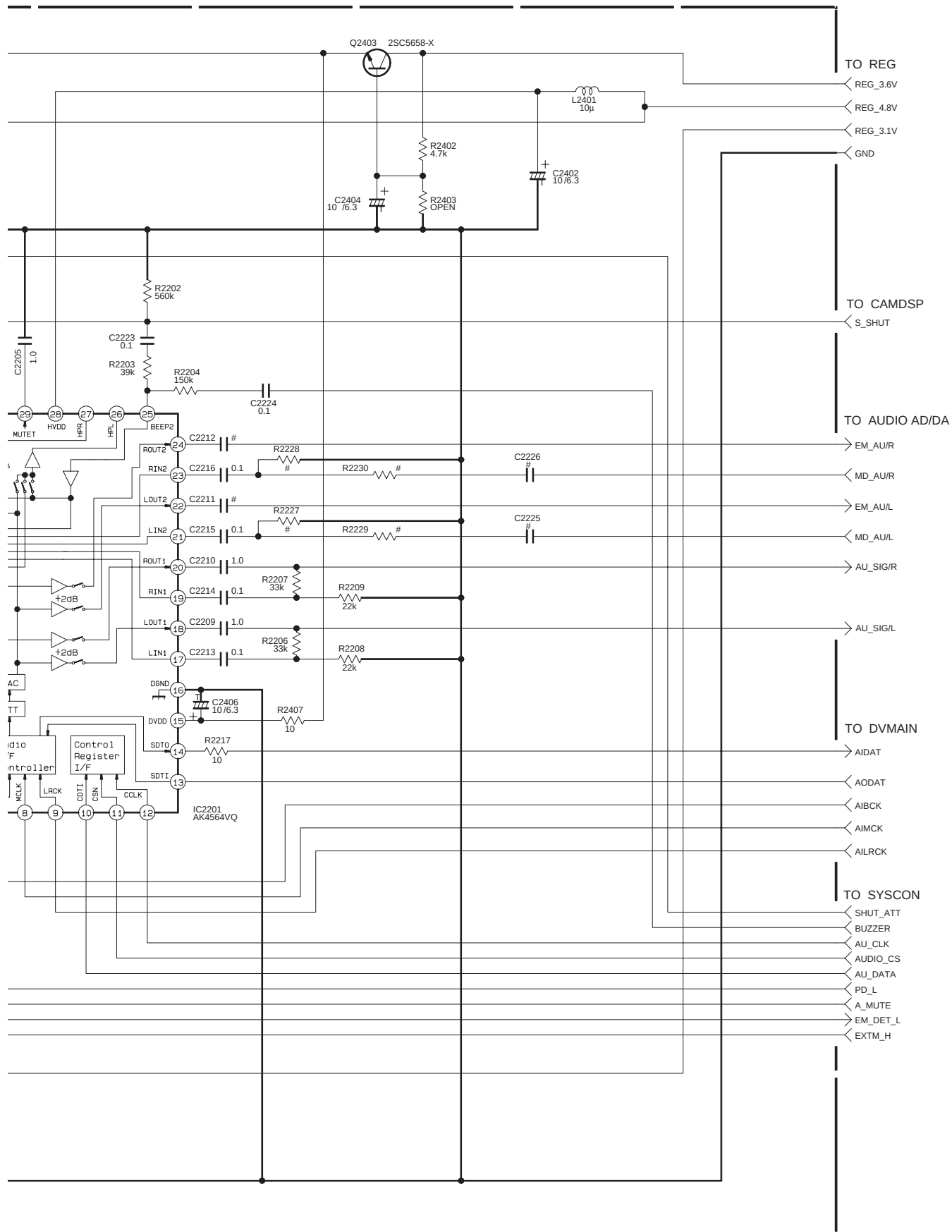
0 1 MAIN (REEL)



### ■ MAIN(AUDIO) SCHEMATIC DIAGRAM



NOTE : The parts with marked (\*) is not used.



y20308001a\_rev0.1

■ MAIN(AUDIO AD/DA) SCHEMATIC DIAGRAM

0 1 MAIN(AUDIO AD/DA)

TO AUDIO

MD\_AU/L  
MD\_AU/R

EM\_AU/R  
EM\_AU/L

R2101  
470

R2102  
470

C2102 1.0

C2101 1.0

C2106  
0.1

C2107  
0.1

C2104  
0.0022

C2108  
4.7/6.3

C2103  
0.0022

C2105  
10/6

IC2101  
AK4550VT-X

16  
AOUTR

15  
AOUTL

14  
PWDA

13  
PWAD

12  
SCLK

11  
MCLK

1  
VCOM

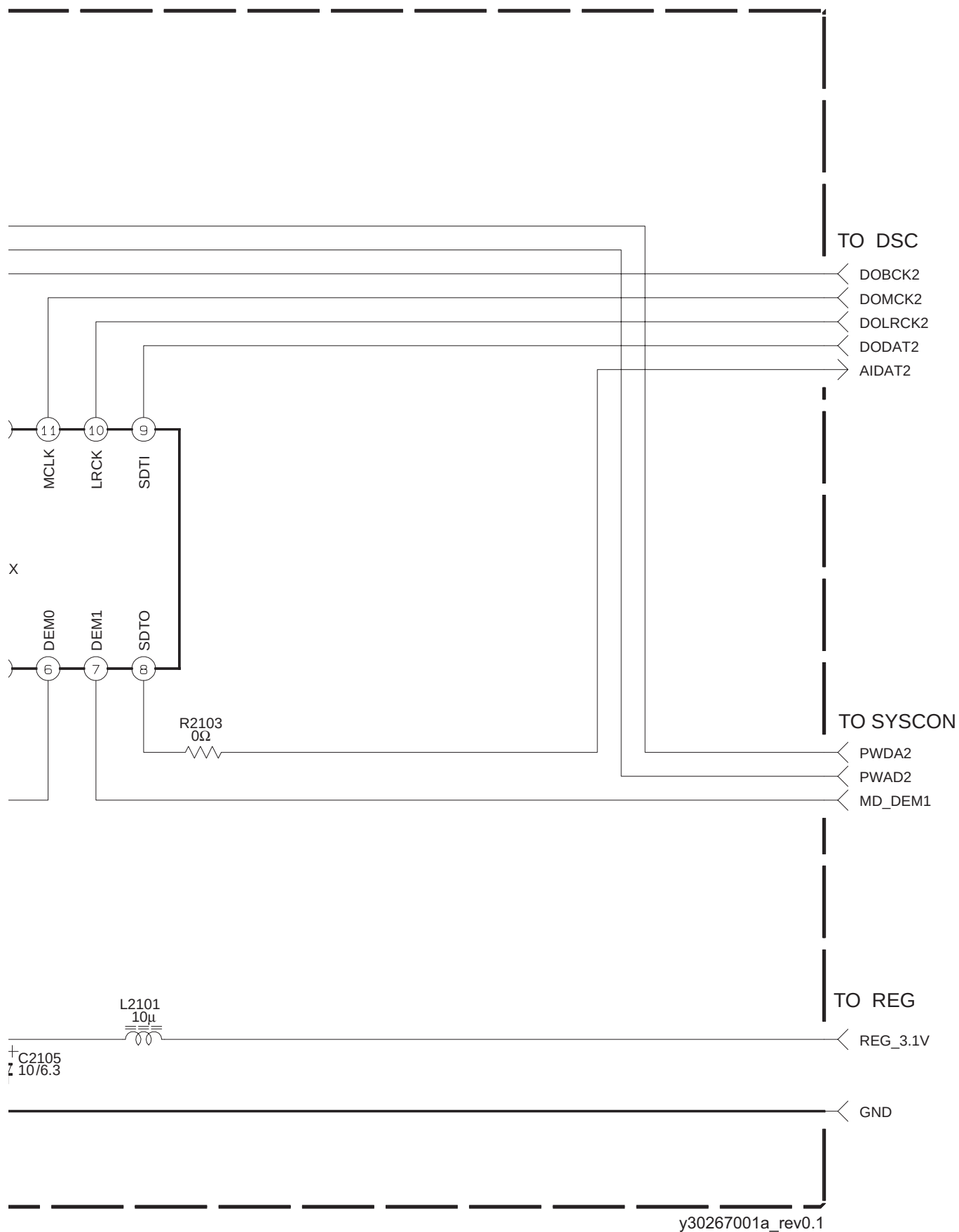
2  
AINR

3  
AINL

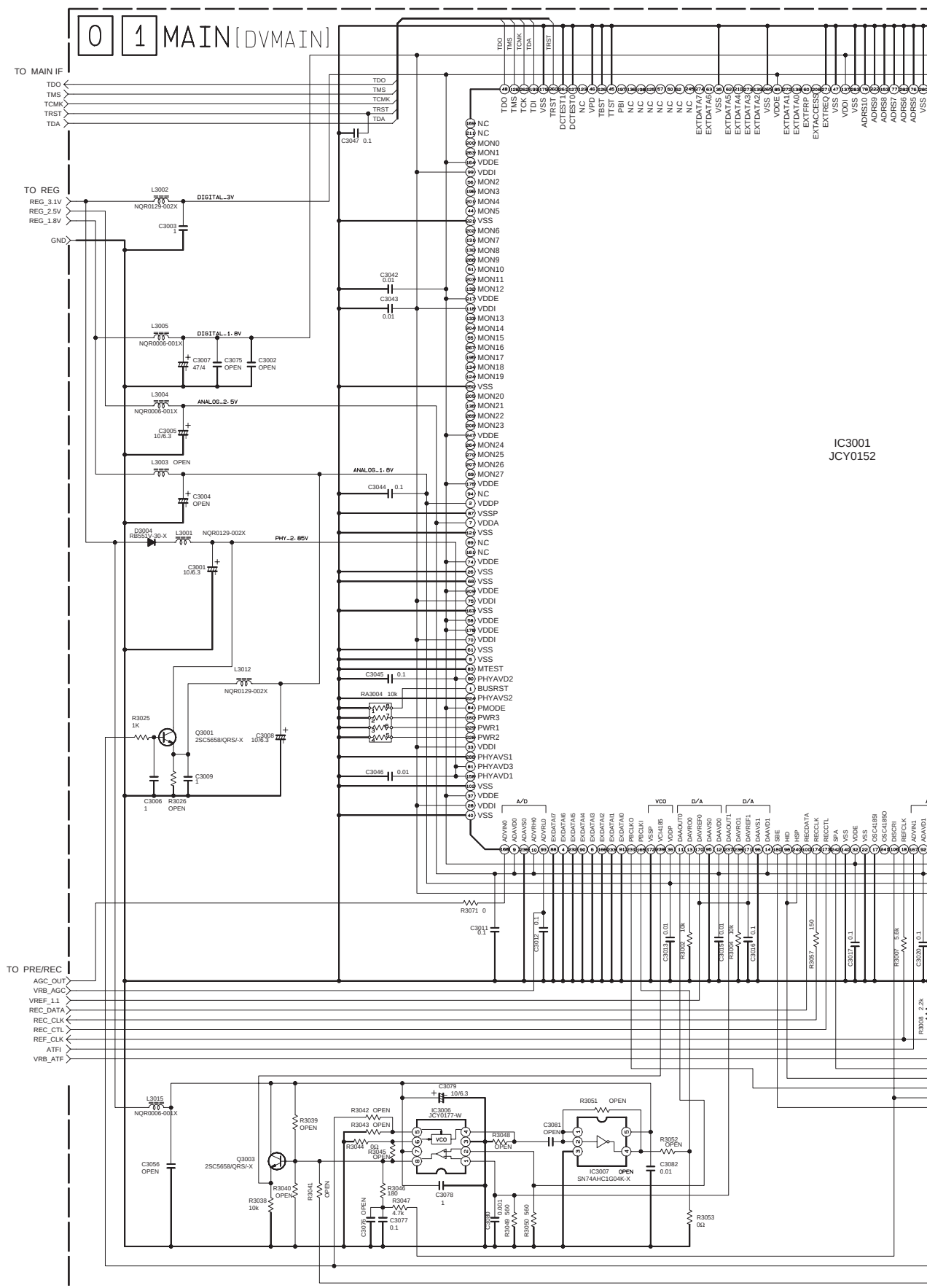
4  
VSS

5  
VDD

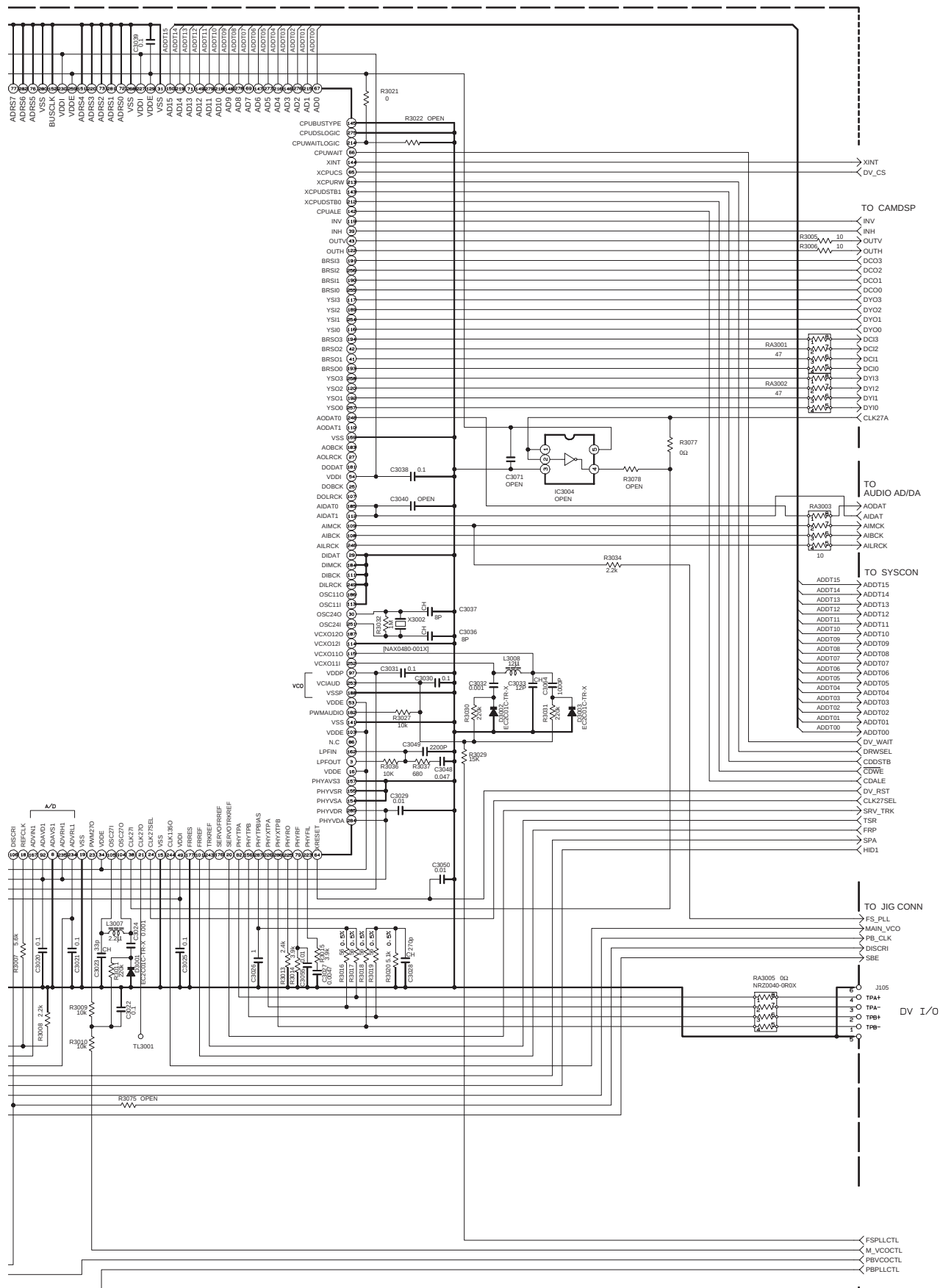
6  
DEMOC



### ■ MAIN(DVMAIN) SCHEMATIC DIAGRAM

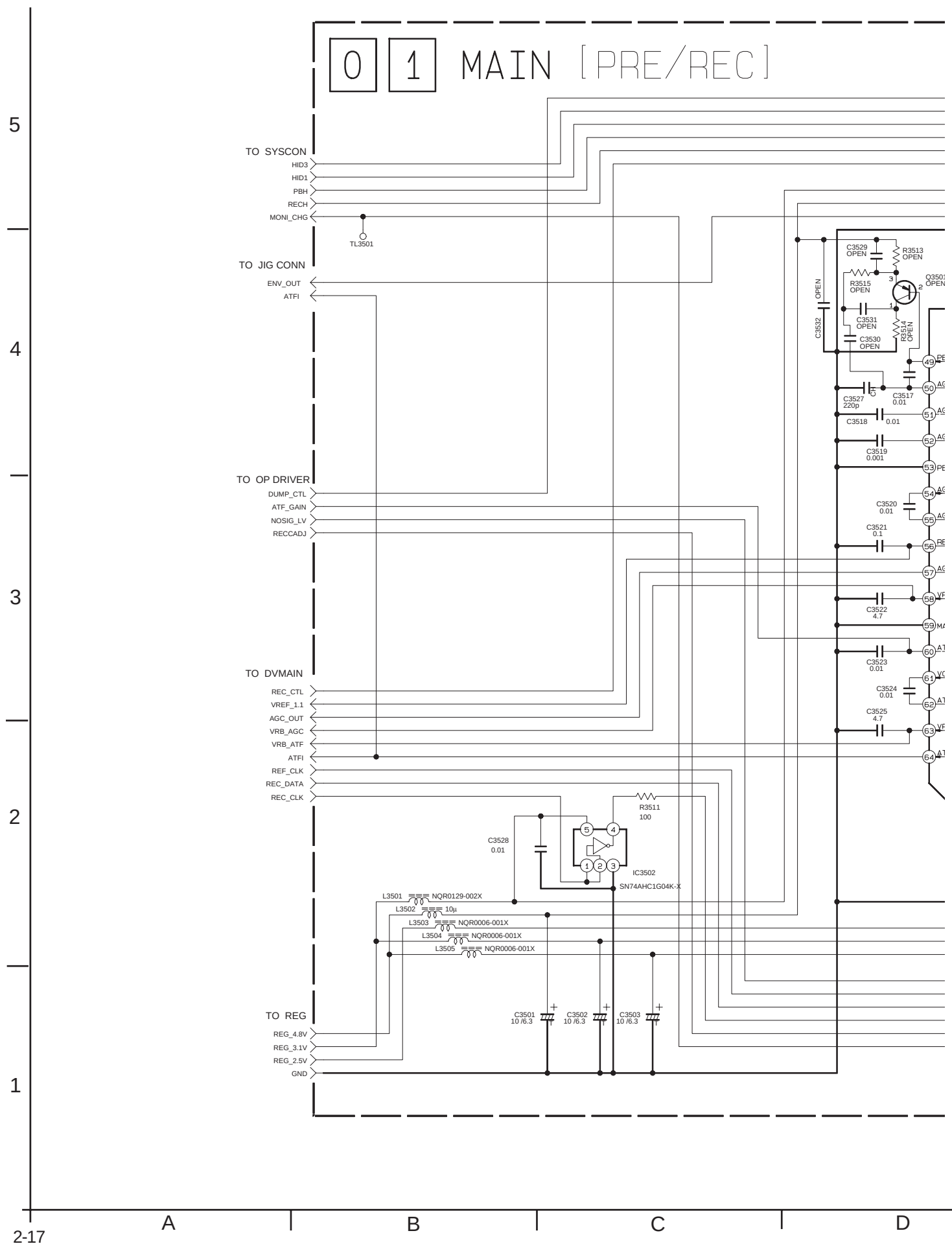


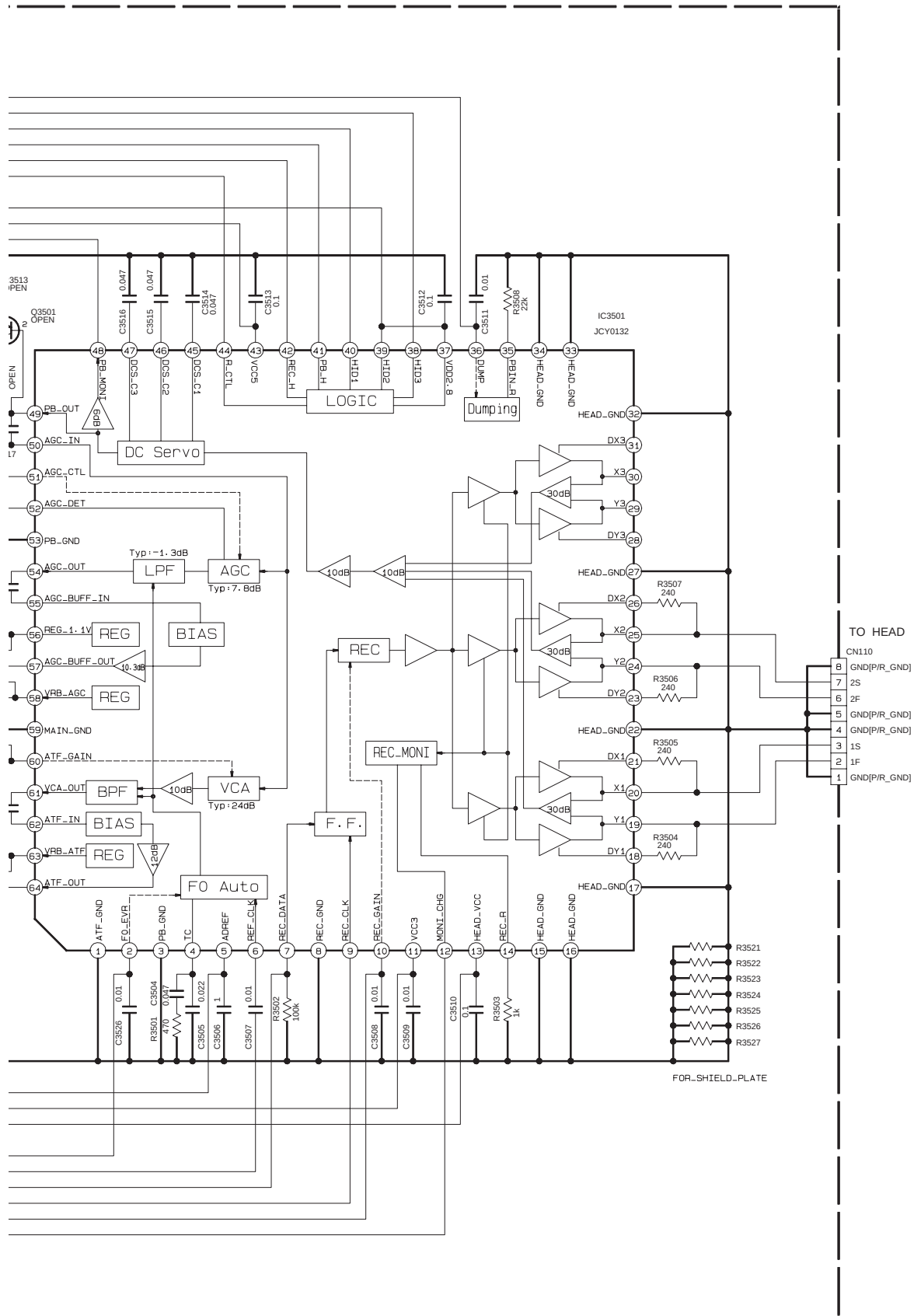
NOTE : The parts with marked (\*) is not used.



y10432001a\_rev0.1

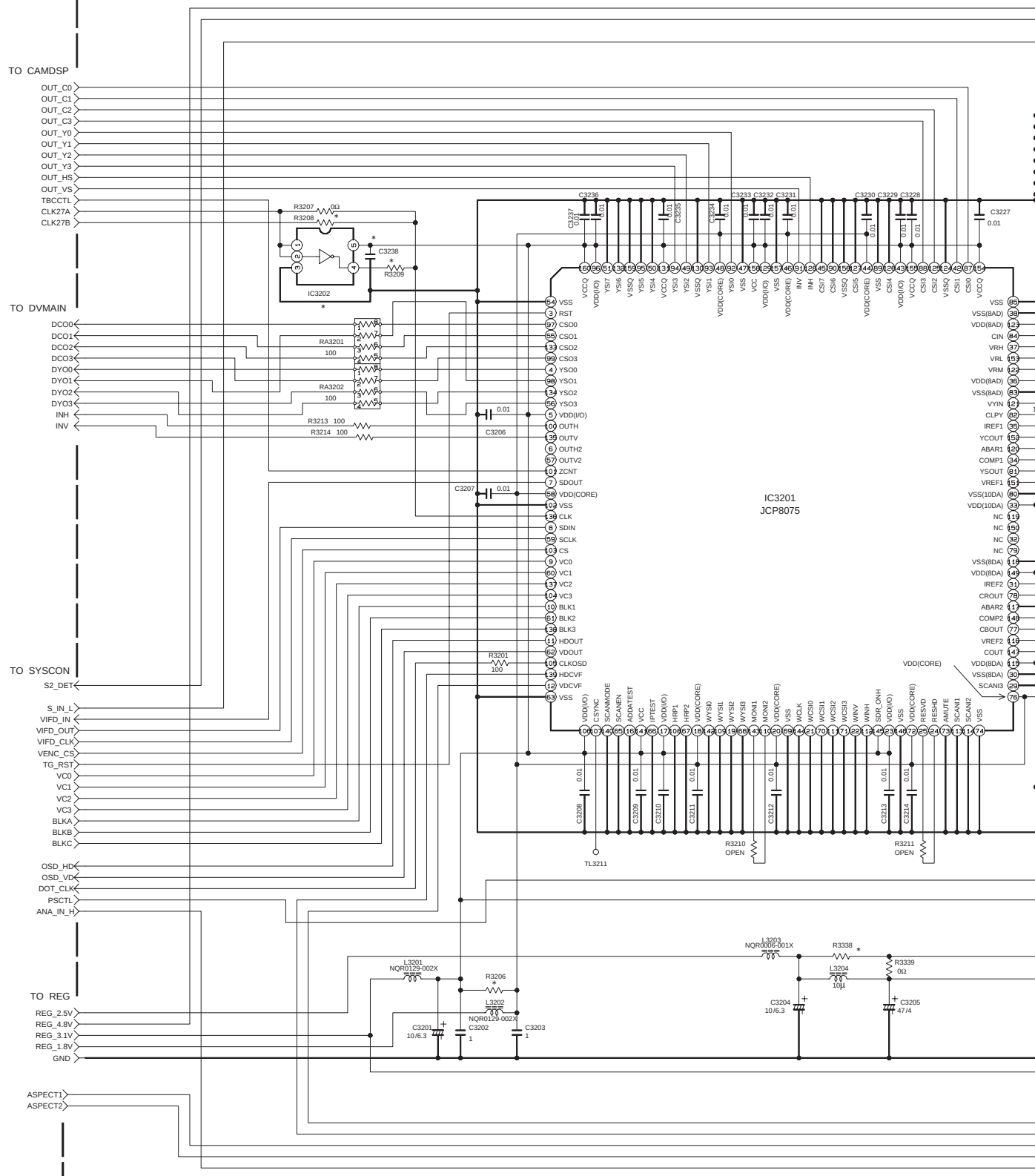
■ MAIN(PRE/REC) SCHEMATIC DIAGRAM



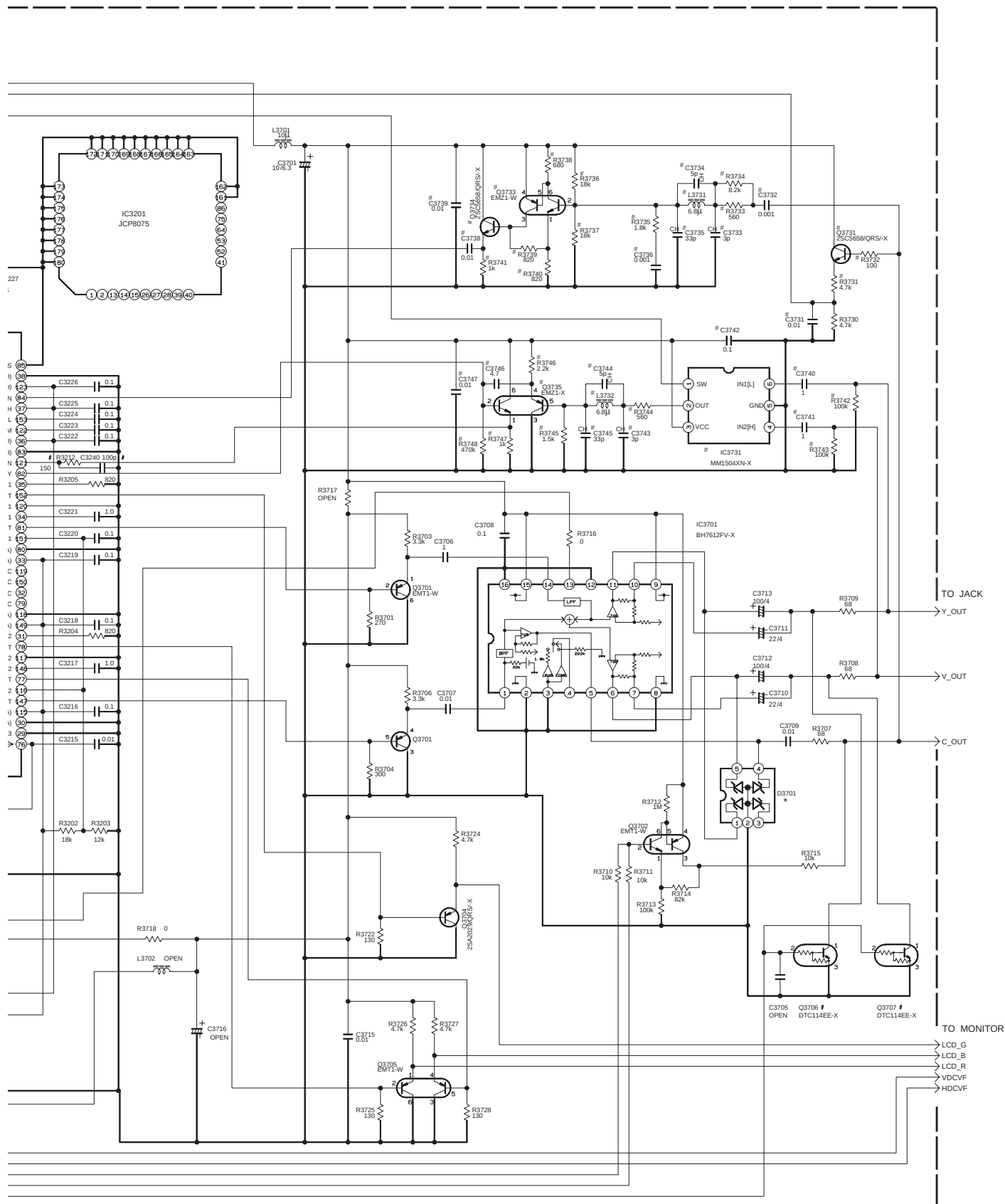


y20310001a\_rev0.1

## ■ MAIN(VIDEO I/O) SCHEMATIC DIAGRAM



NOTE : The parts with marked (\*) is not used.



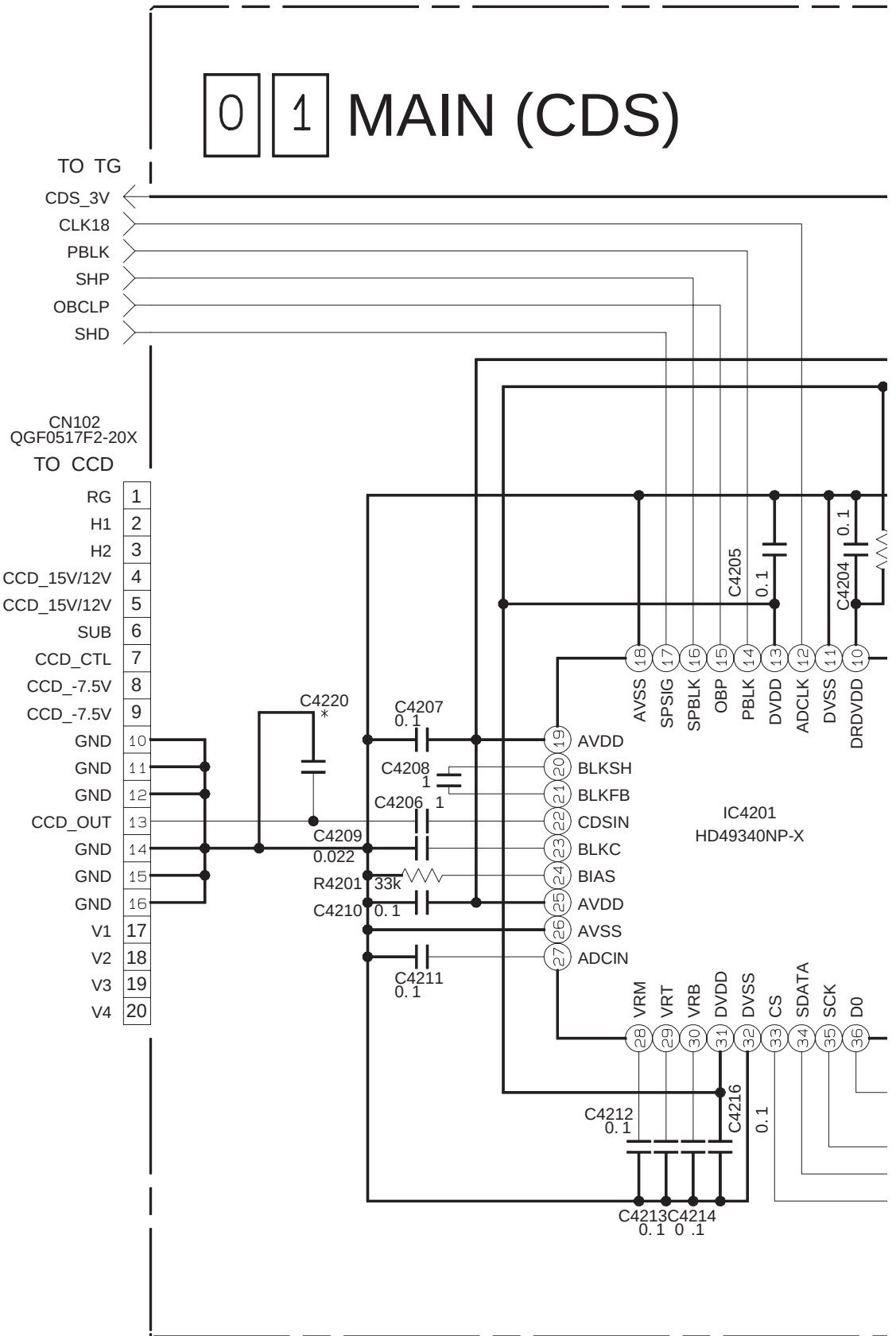
#1 EXCHANGE PARTS LIST

|                    | WITH ANALOG INPUT | WITHOUT ANALOG INPUT |
|--------------------|-------------------|----------------------|
| IC3731             | WARE              | NO WARE              |
| Q3731, Q3733-Q3735 | WARE              | NO WARE              |
| L3731, L3732       | WARE              | NO WARE              |
| R3731-R3748, R3212 | WARE              | NO WARE              |
| C3731-C3747, C3240 | WARE              | NO WARE              |
| Q3706, Q3707       | WARE              | NO WARE              |

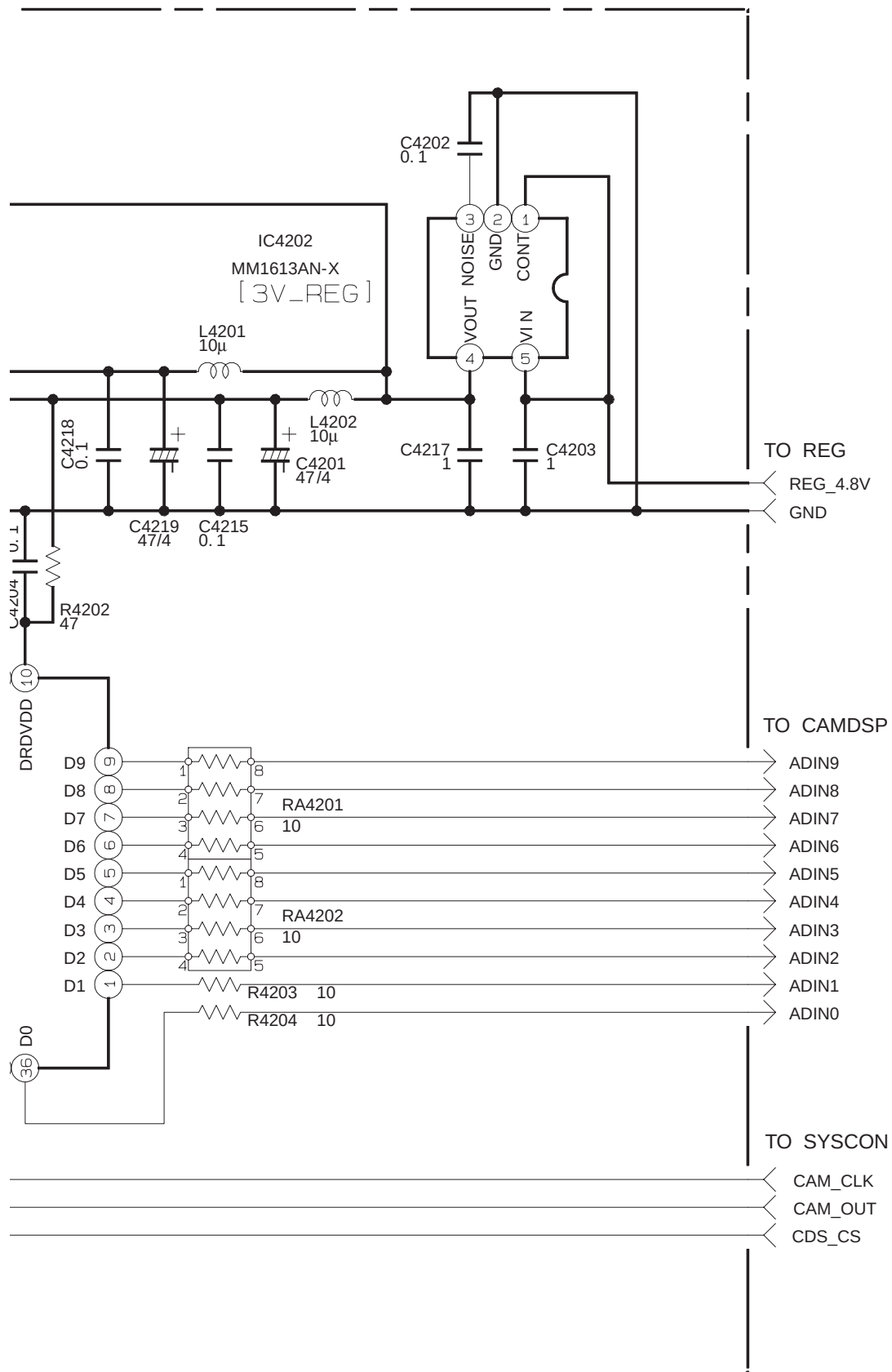
y10434001a\_rev0.1

■ MAIN(CDS) SCHEMATIC DIAGRAM

5  
4  
3  
2  
1

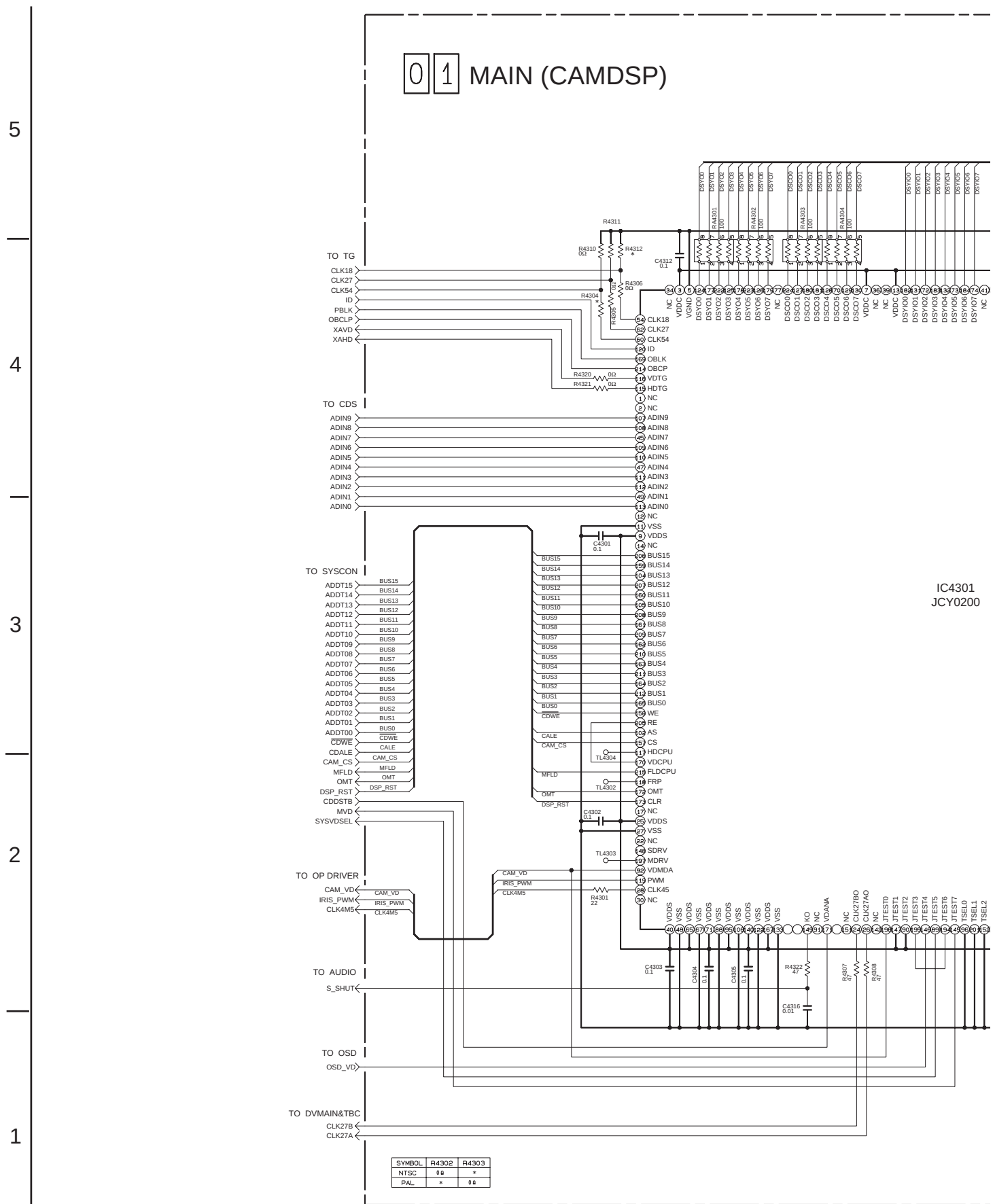


NOTE : The parts with marked (\*) is not used.

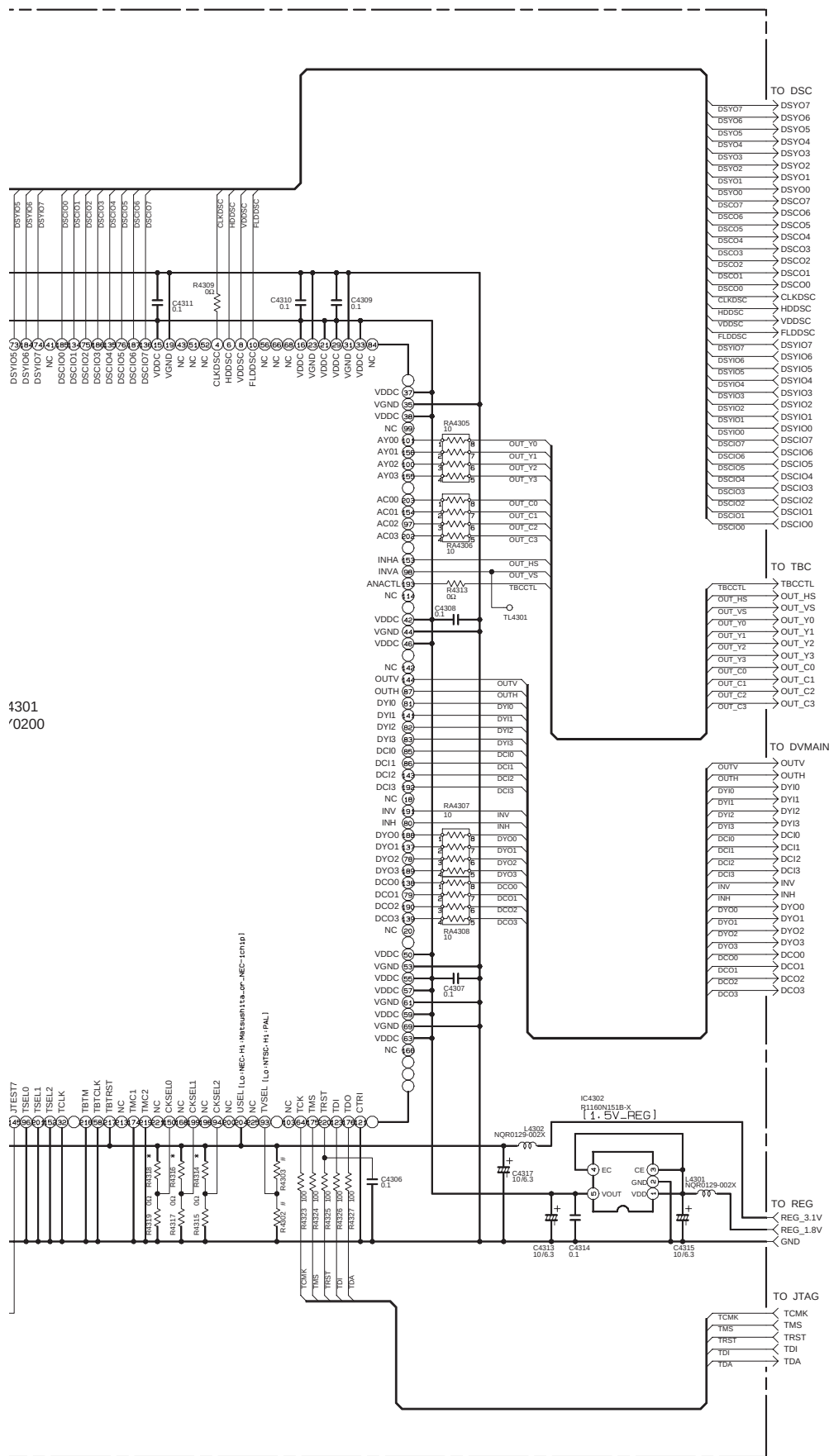


y30269001a\_rev0.1

## ■ MAIN(CAMDSP) SCHEMATIC DIAGRAM

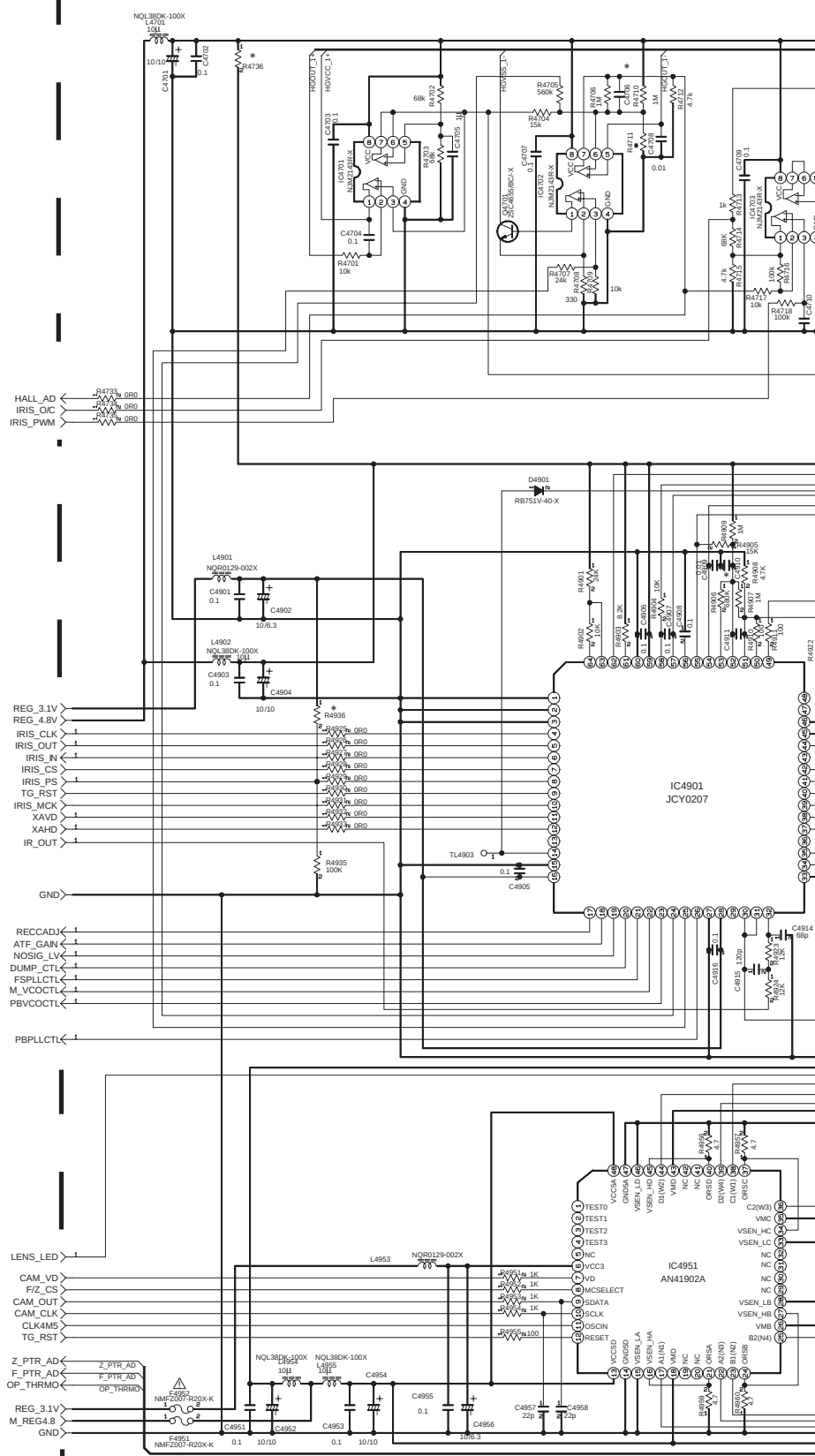


NOTE : The parts with marked (\*) is not used.



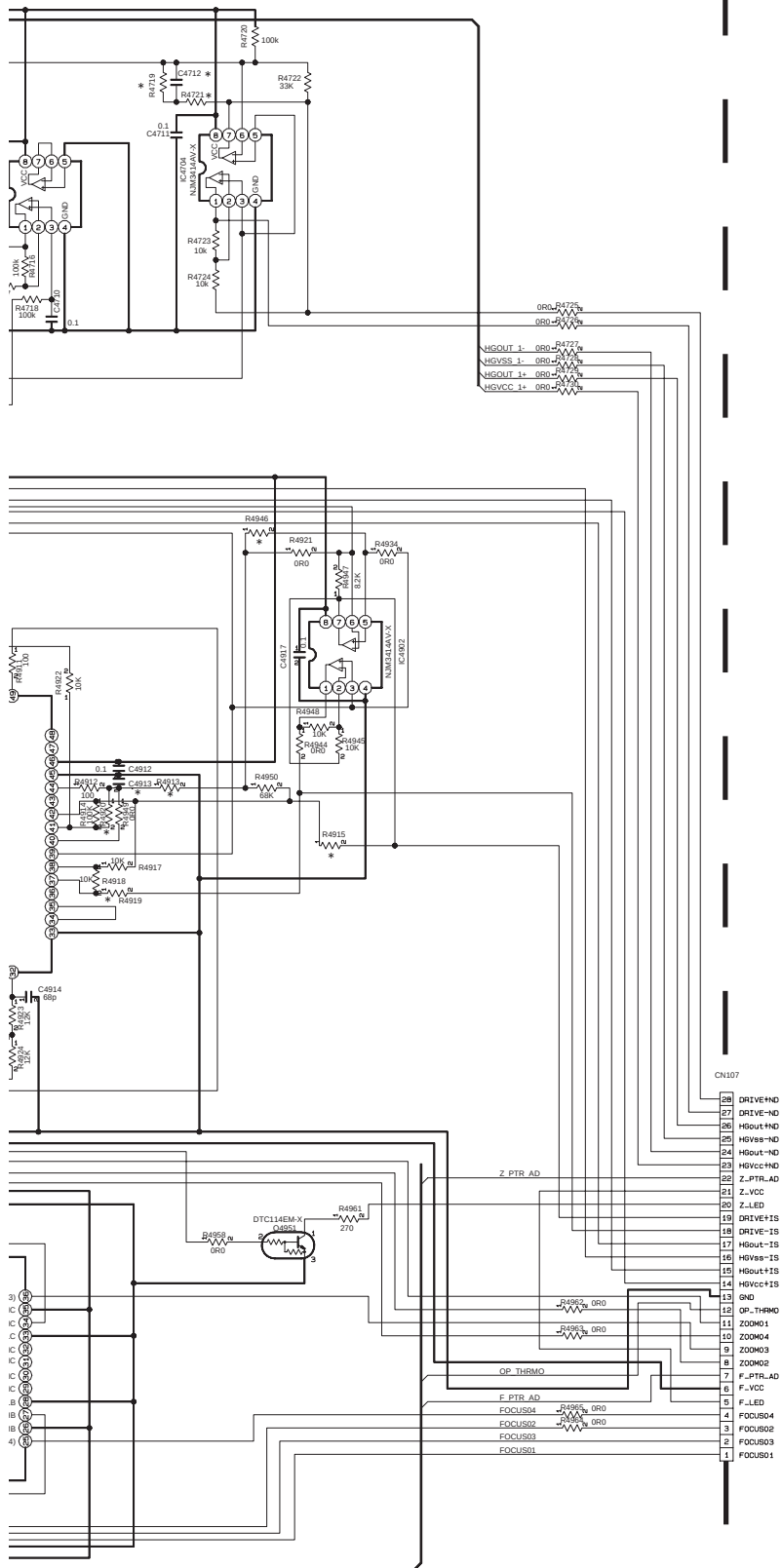
y10435001a\_rev0.1

### ■ MAIN(OP DRIVER) SCHEMATIC DIAGRAM



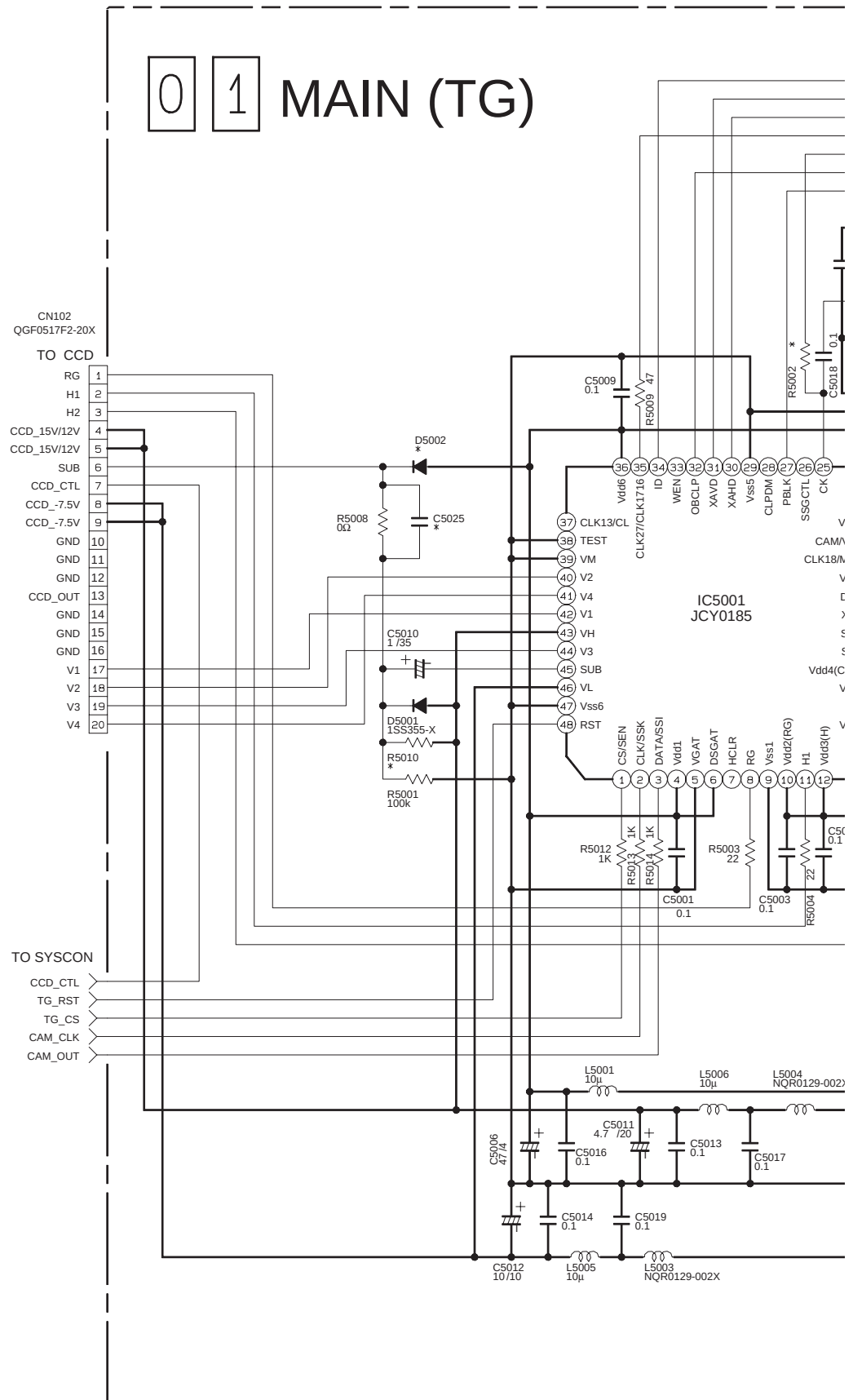
NOTE : The parts with marked (\*) is not used.

# MAIN(OP DRIVER)

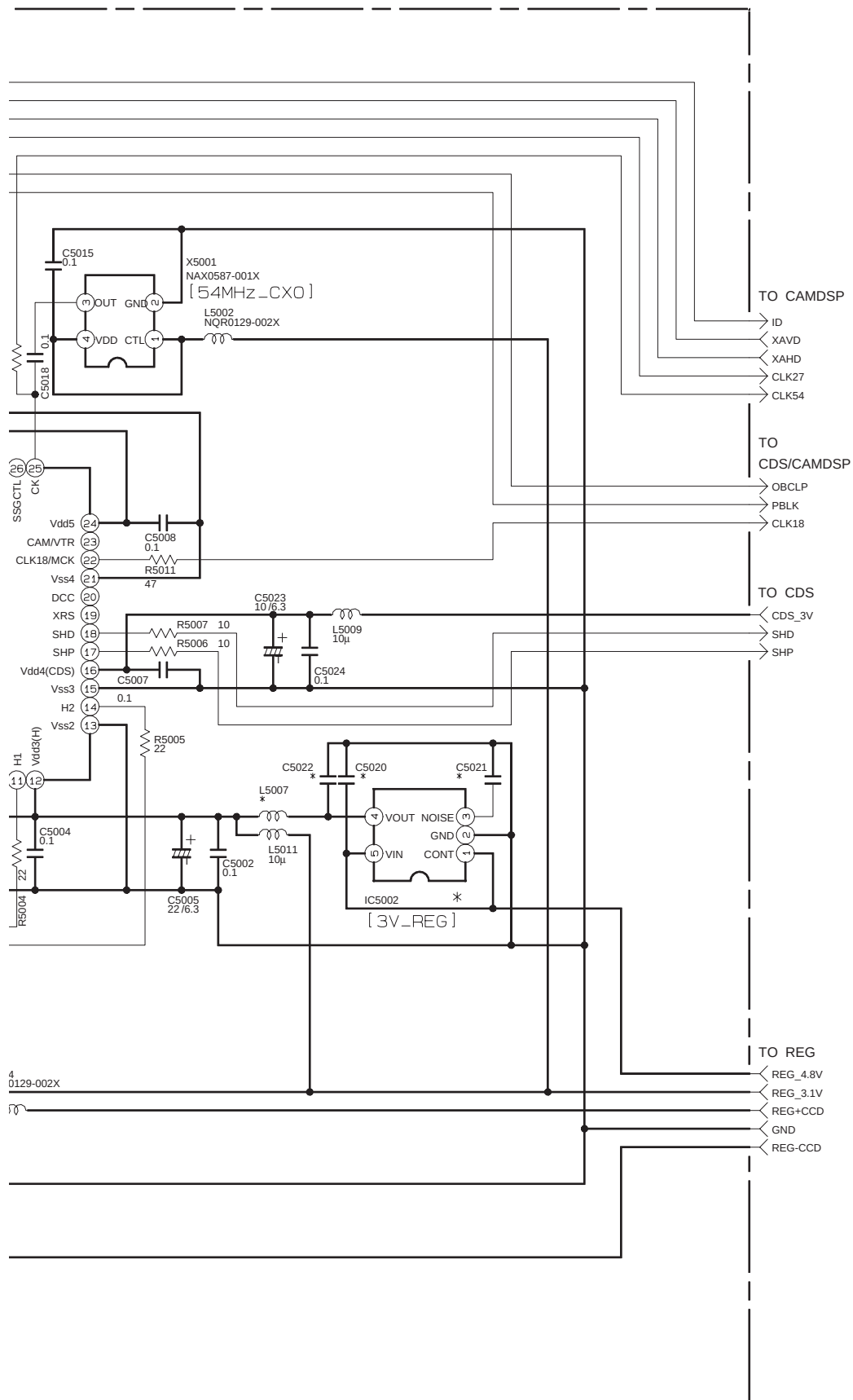


y10437001a\_rev0.1

## ■ MAIN(TG) SCHEMATIC DIAGRAM

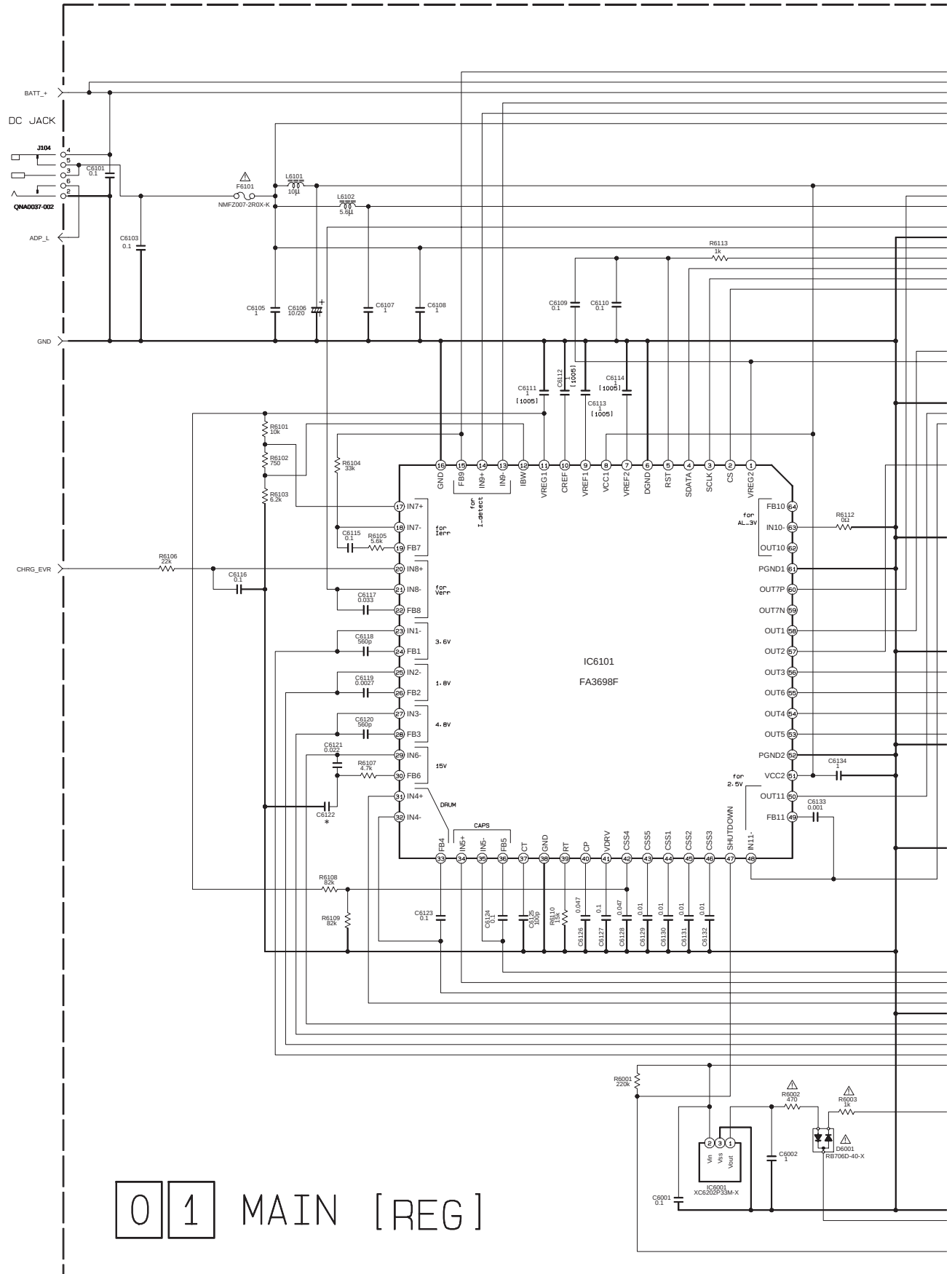


NOTE : The parts with marked (\*) is not used.



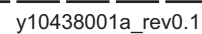
y20311001a\_rev0.1

# ■ MAIN(REG) SCHEMATIC DIAGRAM

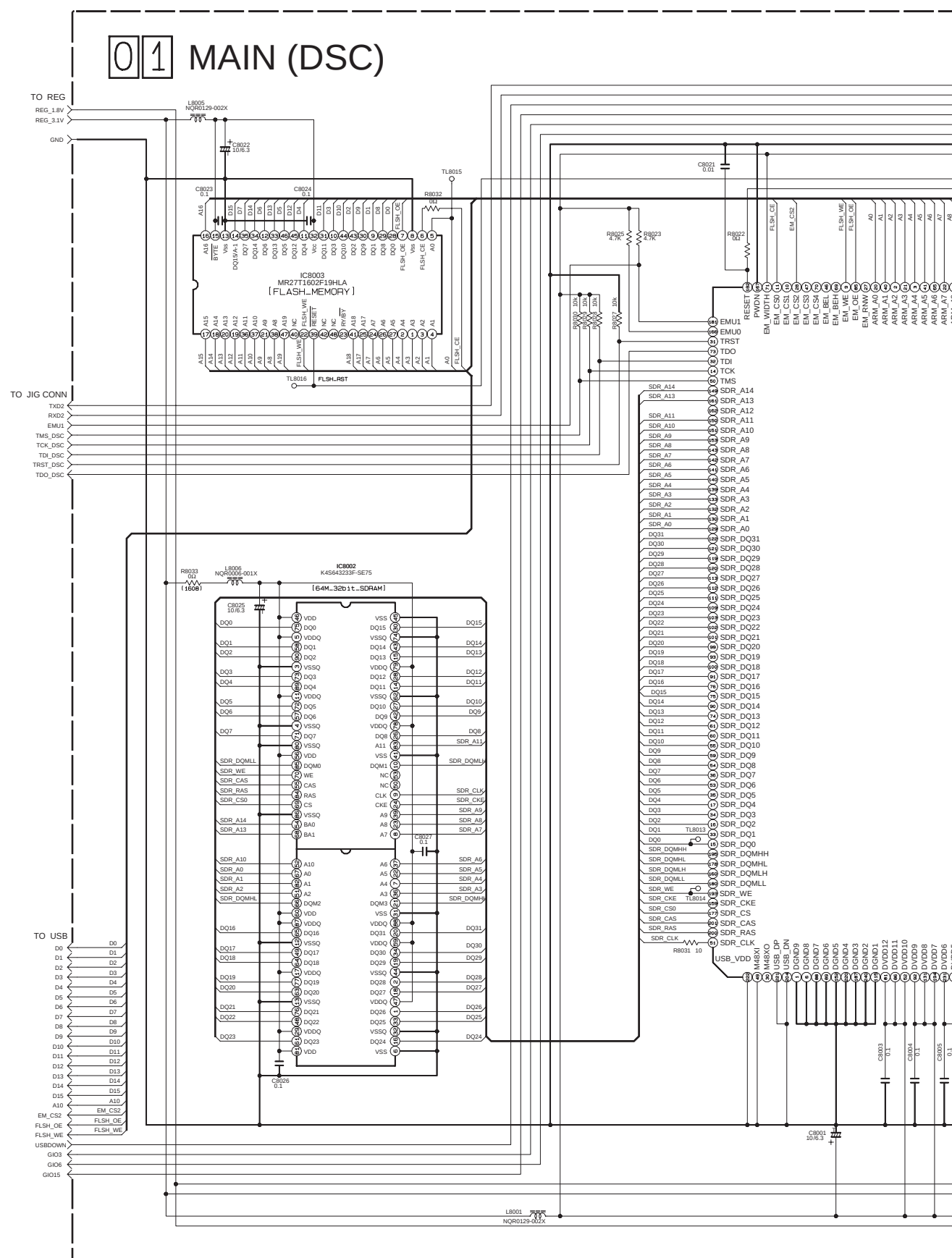


01 MAIN [REG]

NOTE : The parts with marked (\*) is not used.



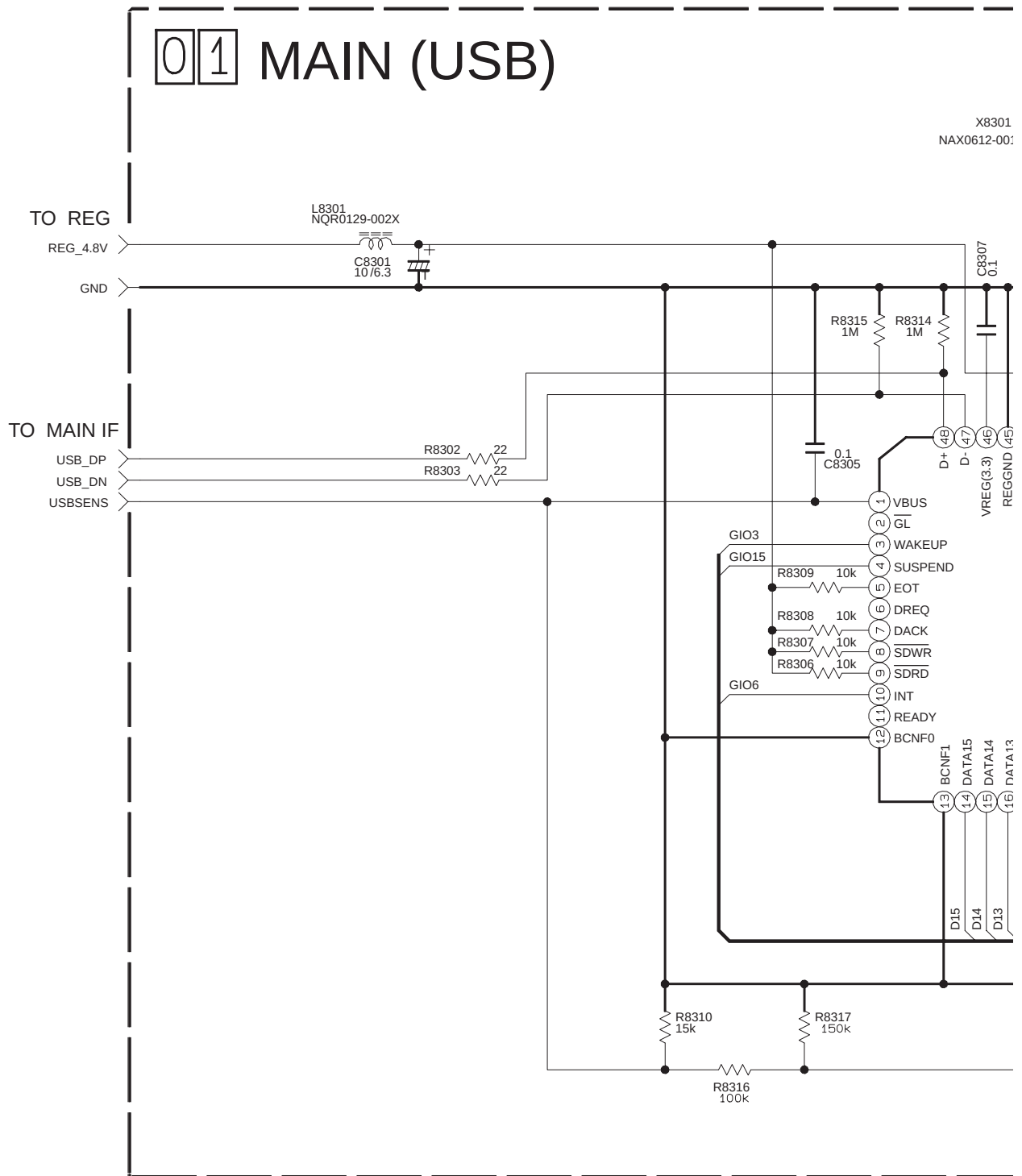
## ■ MAIN(DSC) SCHEMATIC DIAGRAM



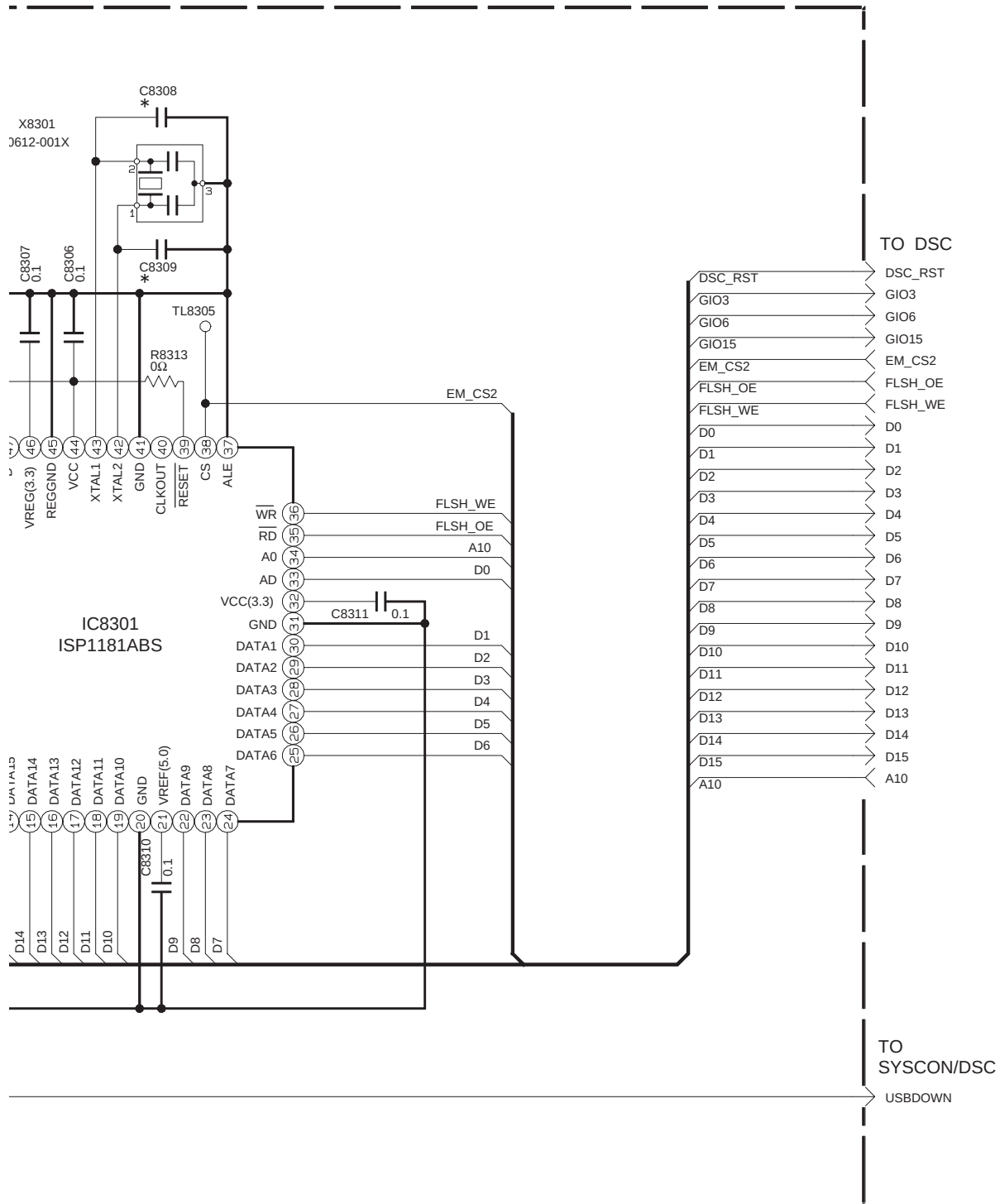
NOTE : The parts with marked (\*) is not used.



■ MAIN(USB) SCHEMATIC DIAGRAM

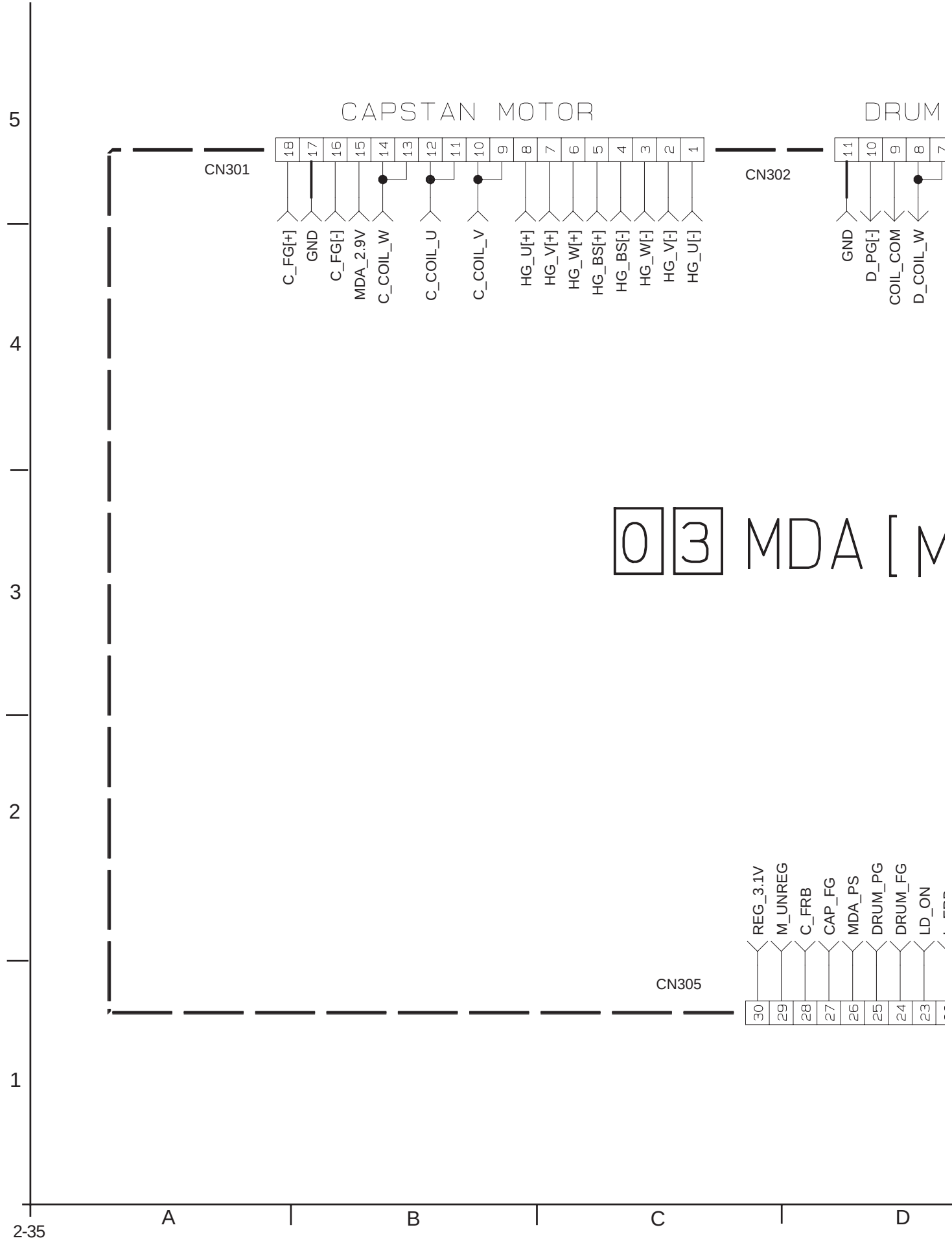


NOTE : The parts with marked (\*) is not used.



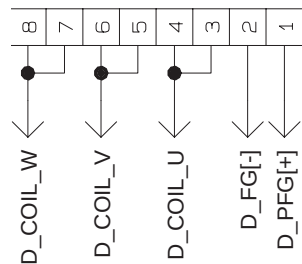
y20312001a\_rev0.1

MDA(MDA IF) SCHEMATIC DIAGRAM

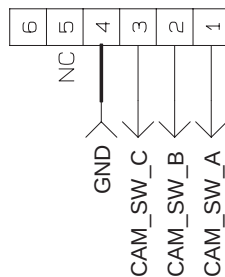


JM MOTOR

ROTARY ENCODER SW

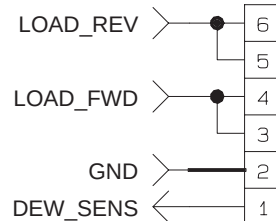


CN303

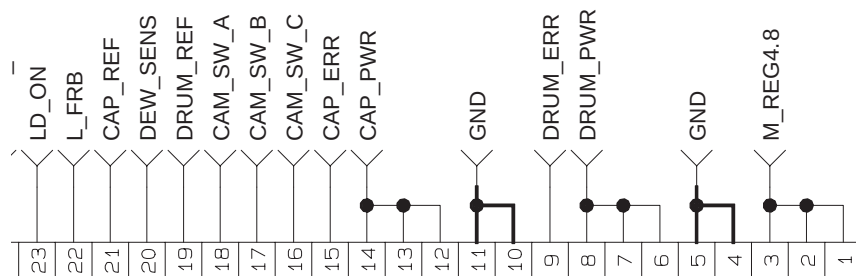


MDA IF]

CN304



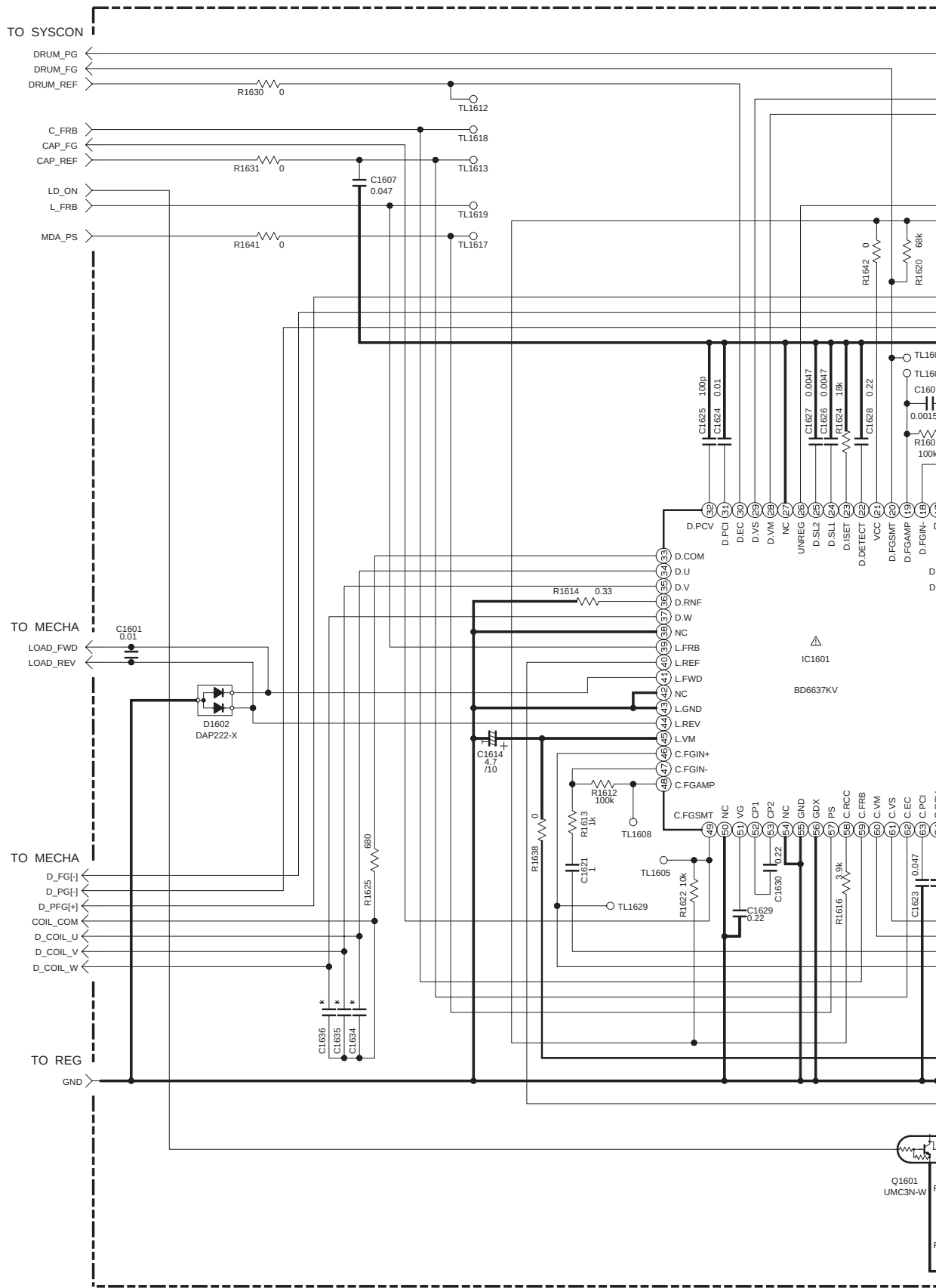
LOADING MOTOR



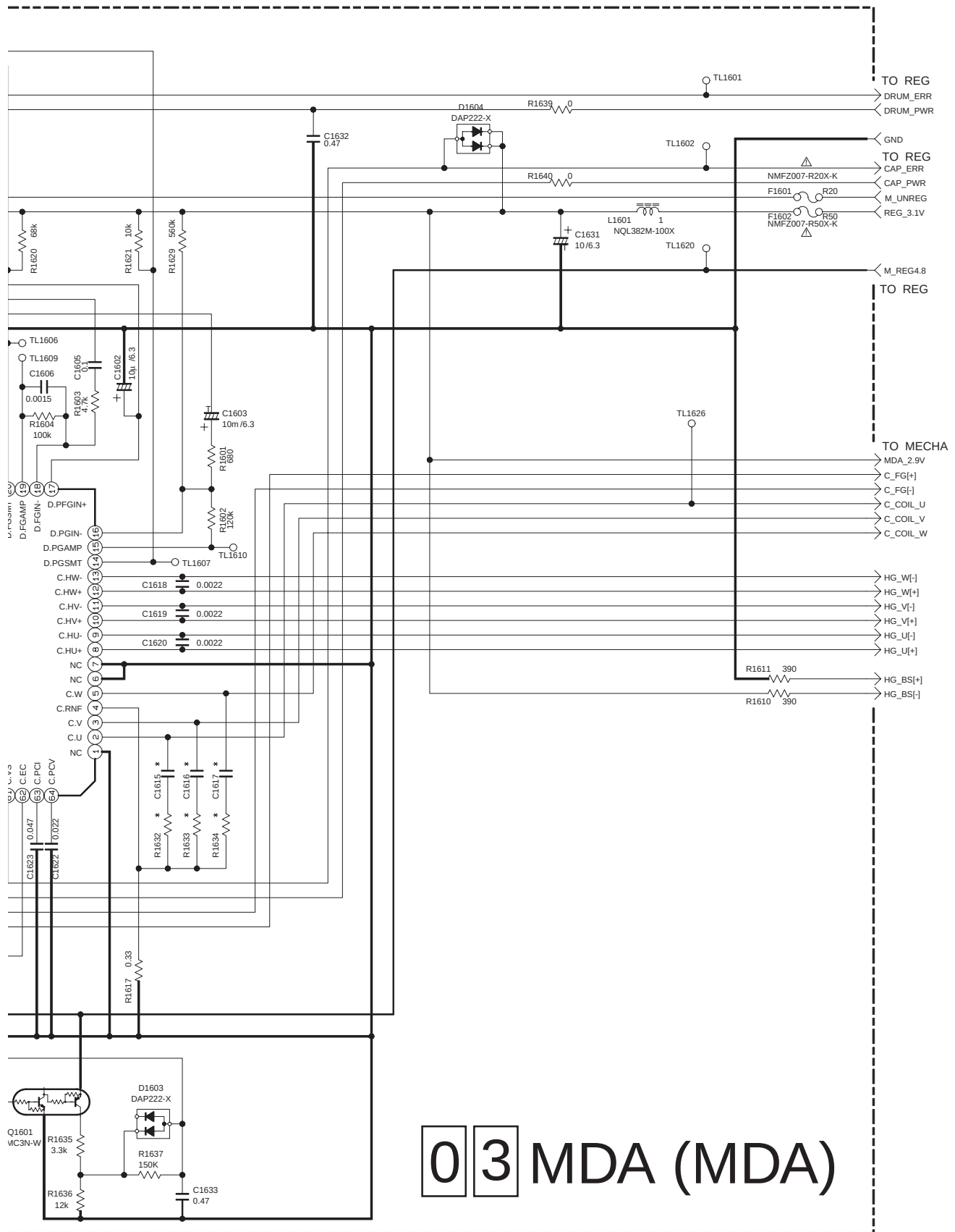
MAIN

y30270001a\_rev0.1

### ■ MDA(MDA) SCHEMATIC DIAGRAM



NOTE : The parts with marked (\*) is not used.

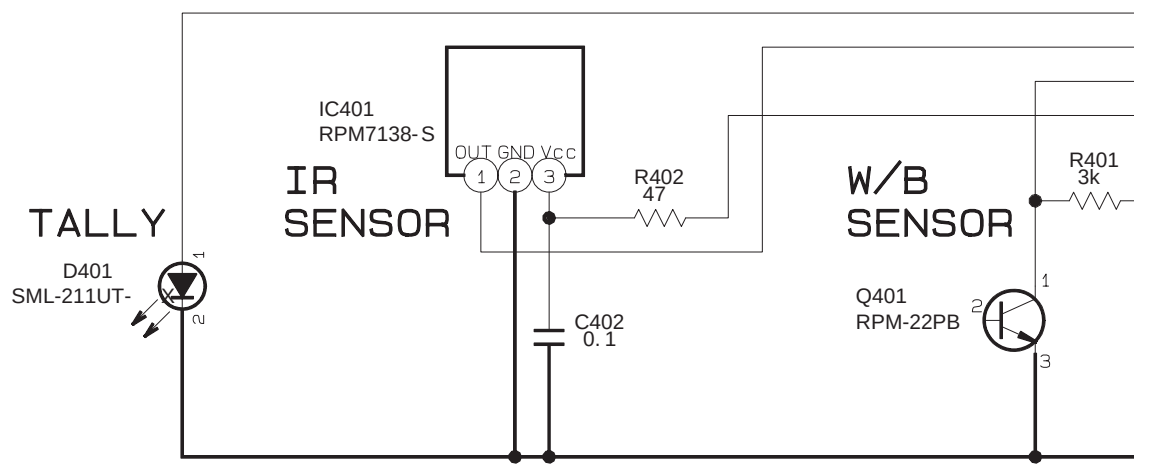
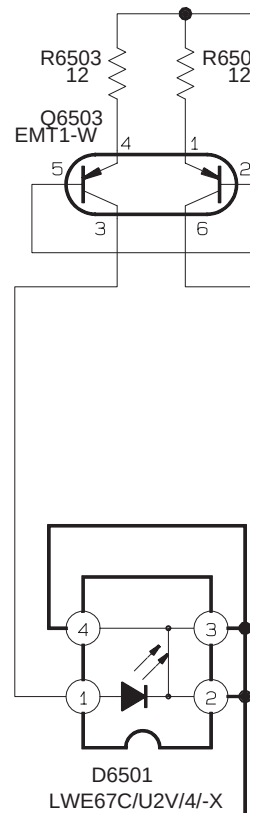


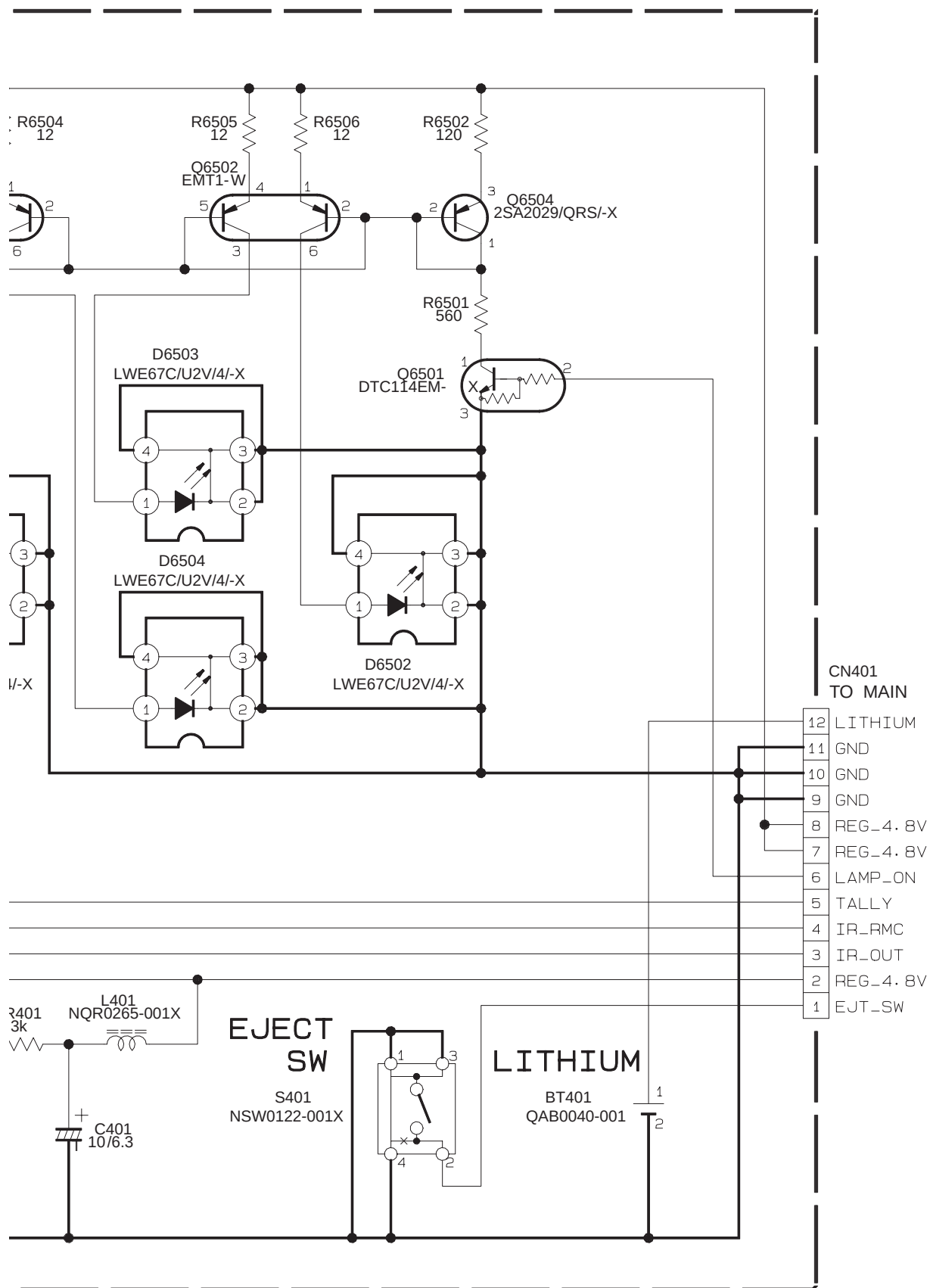
03 MDA (MDA)

y20313001a\_rev0.1

■ FRONT SCHEMATIC DIAGRAM

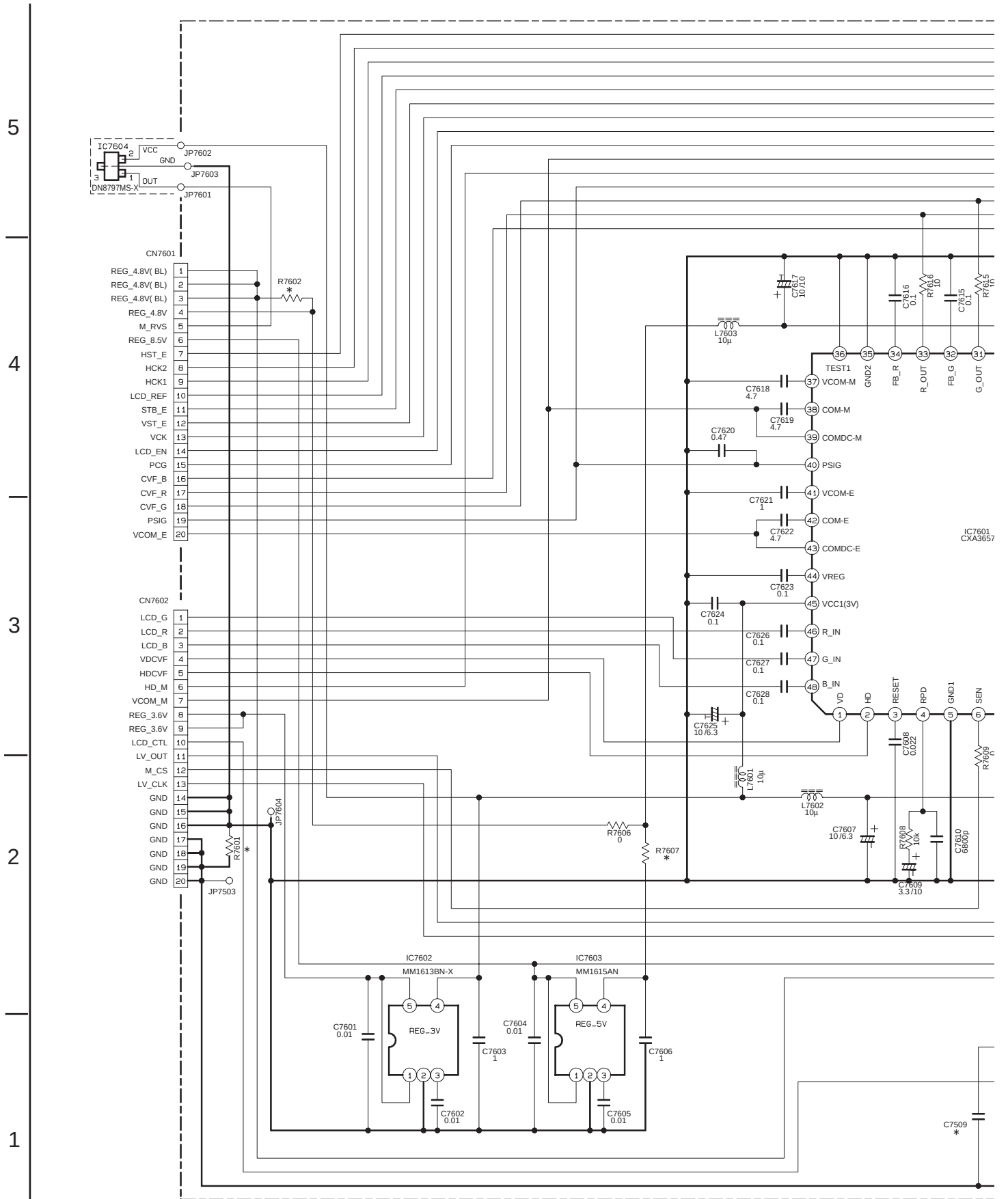
04 FRONT





y30271001a\_rev0.1

## ■ MONITOR SCHEMATIC DIAGRAM

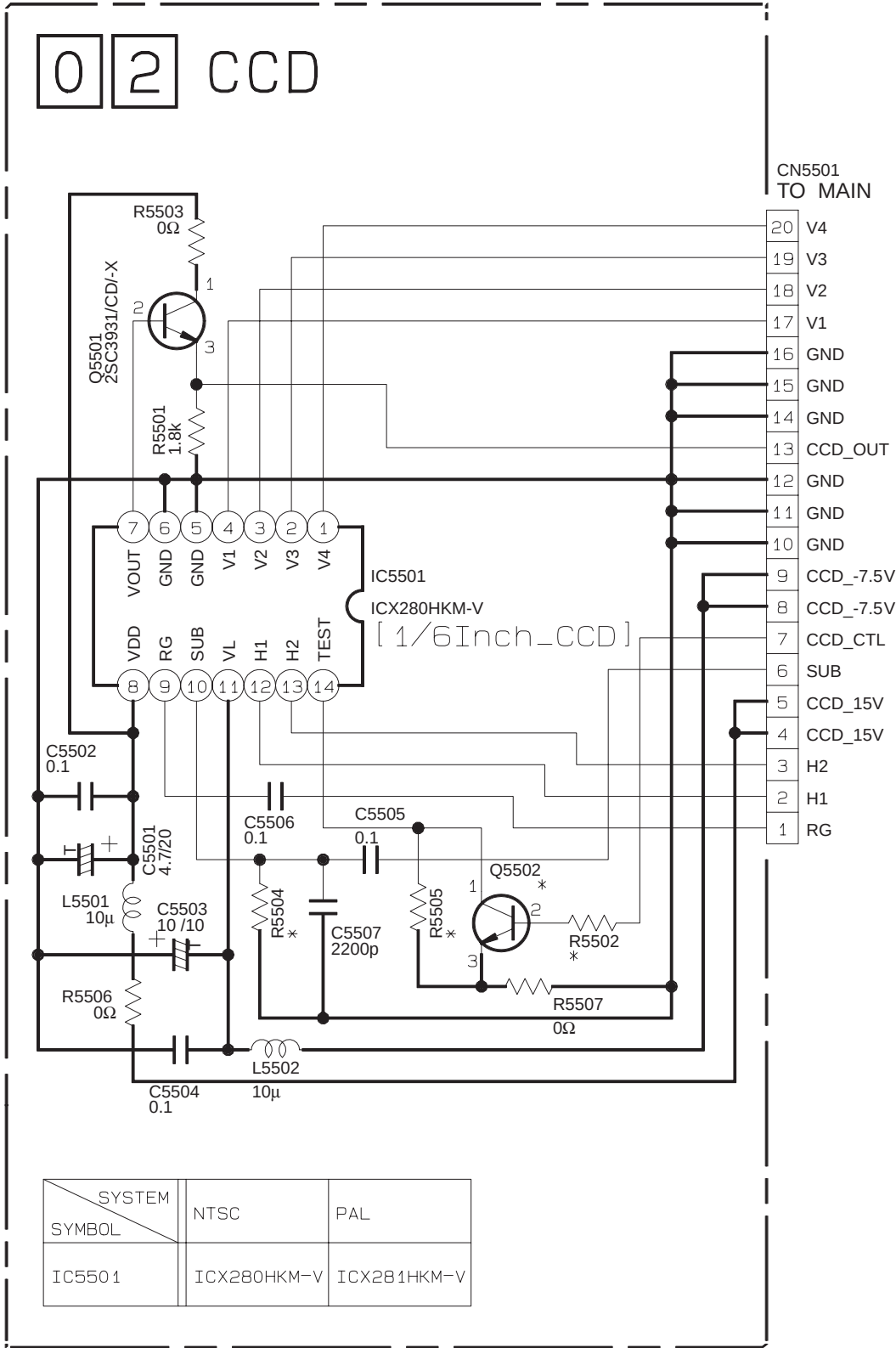


NOTE : The parts with marked (\*) is not used.



CCD SCHEMATIC DIAGRAM

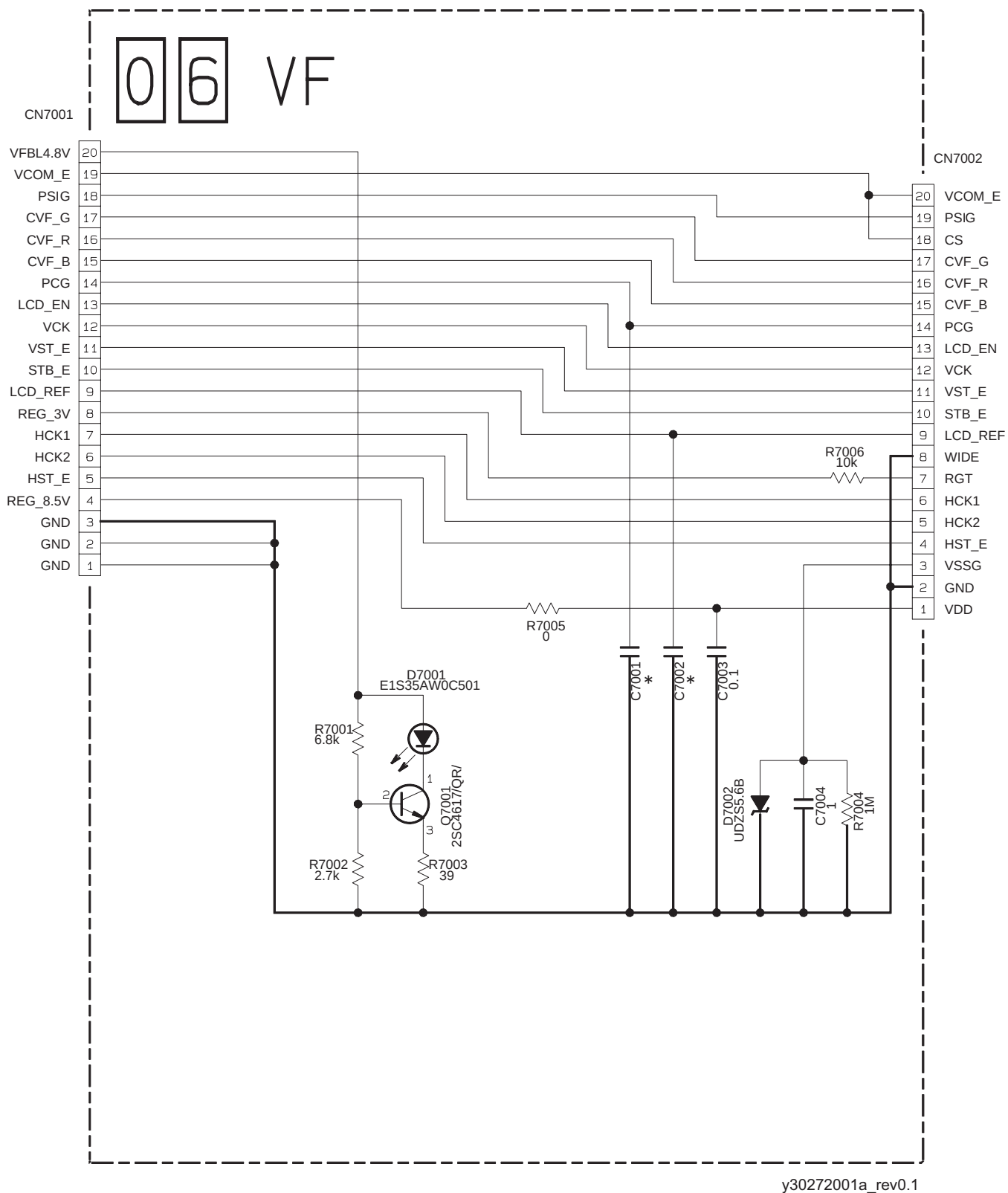
NOTES : ●For the destination of each signal and further line connections that are cut off from this diagram, refer to "BOARD INTERCONNECTIONS".  
●When ordering parts, be sure to order according to the Part Number indicated in the Parts List.  
●IC5501 is incorporated in the CCD base assembly.  
When IC5501 needs replacement, replace the CCD base assembly in whole because it cannot be replaced alone.



y40123001a\_rev0.1

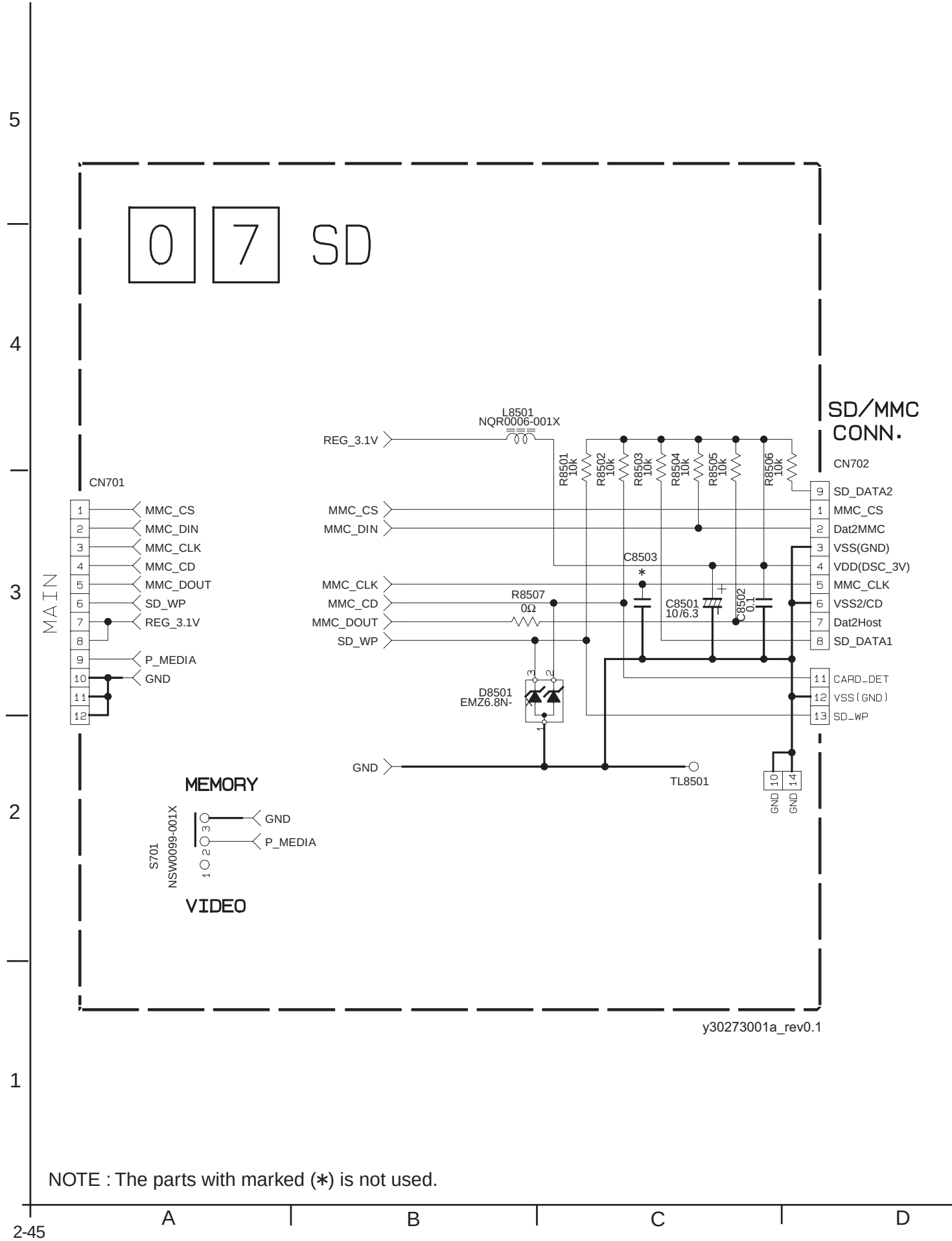
NOTE : The parts with marked (\*) is not used.

## VF SCHEMATIC DIAGRAM



NOTE : The parts with marked (\*) is not used.

SD SCHEMATIC DIAGRAM

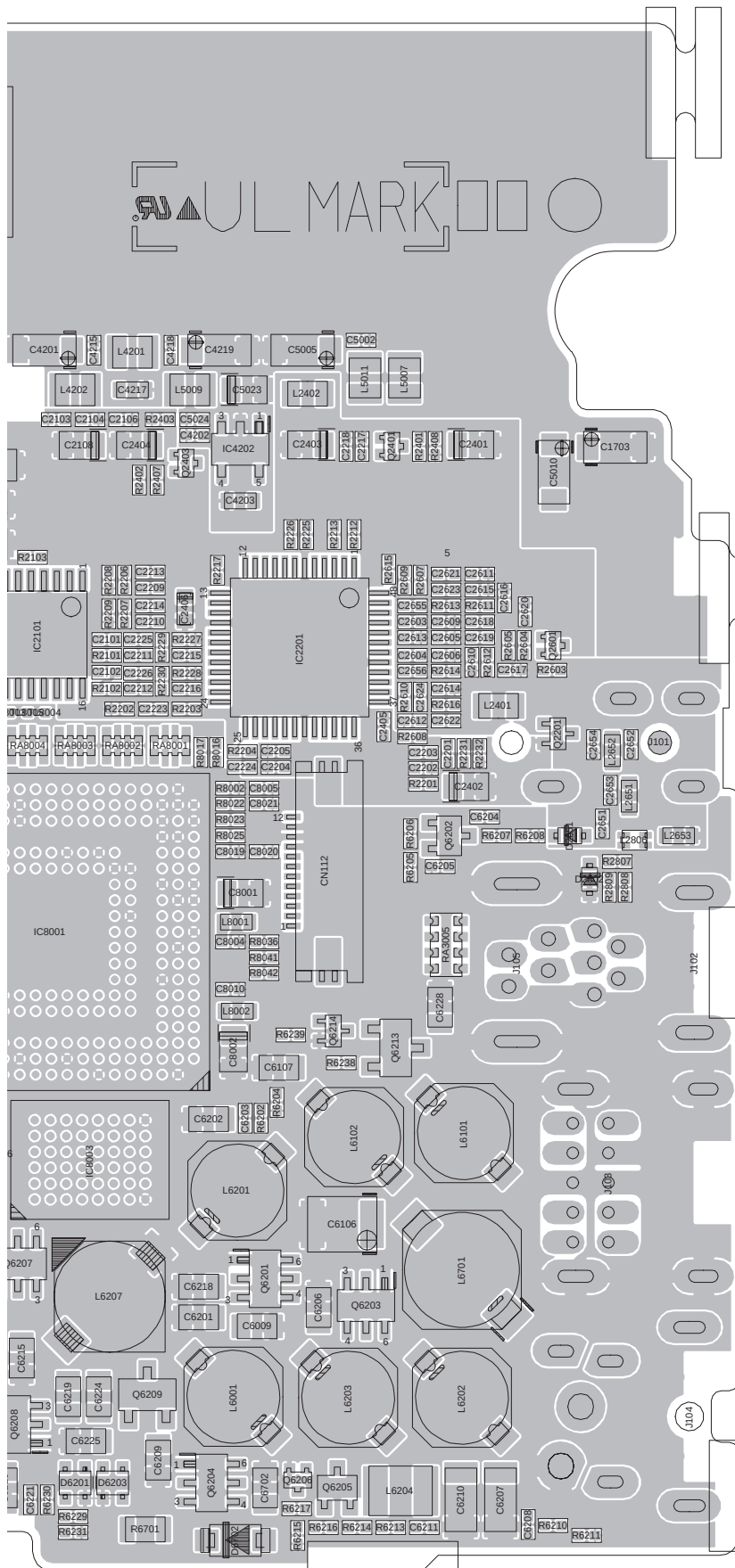


NOTE : The parts with marked (\*) is not used.

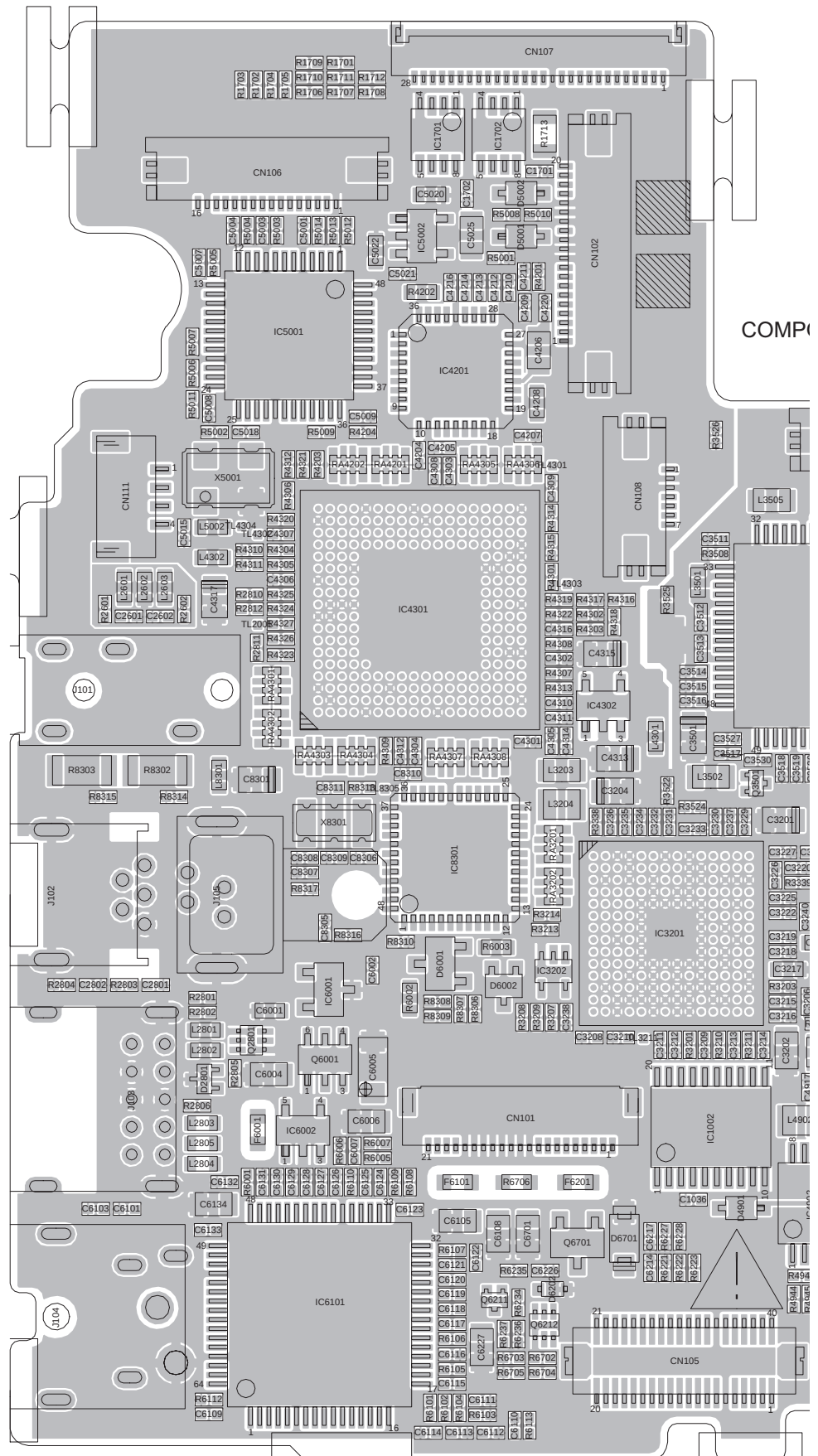


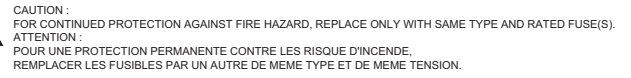
**<01> MAIN**  
**YB10456-01-01**



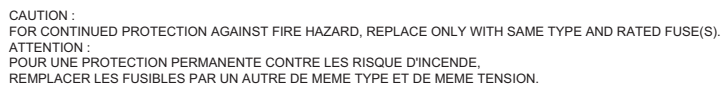


**<01> MAIN**  
**YB10456-01-01**



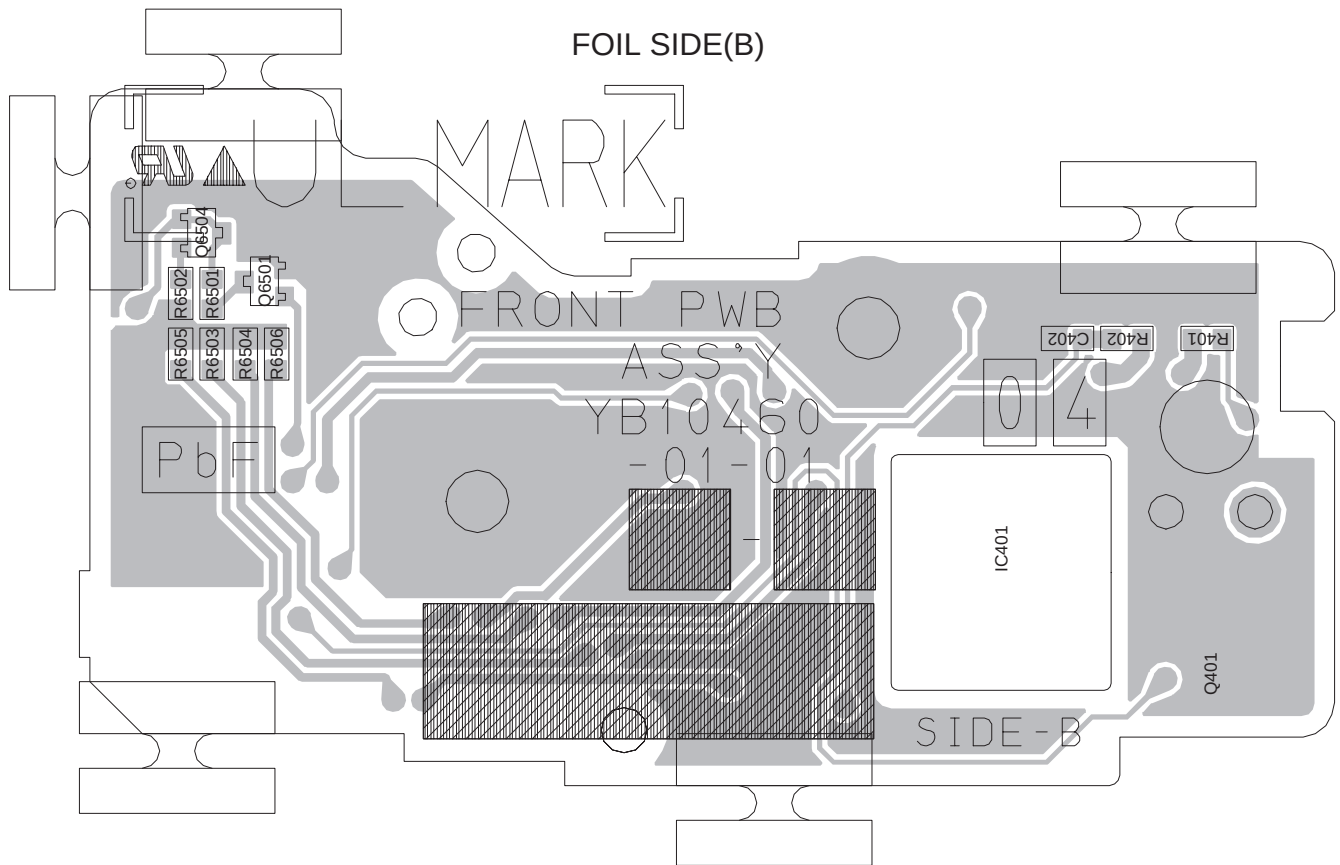


**<03> MDA**  
**YB10459-01-01**

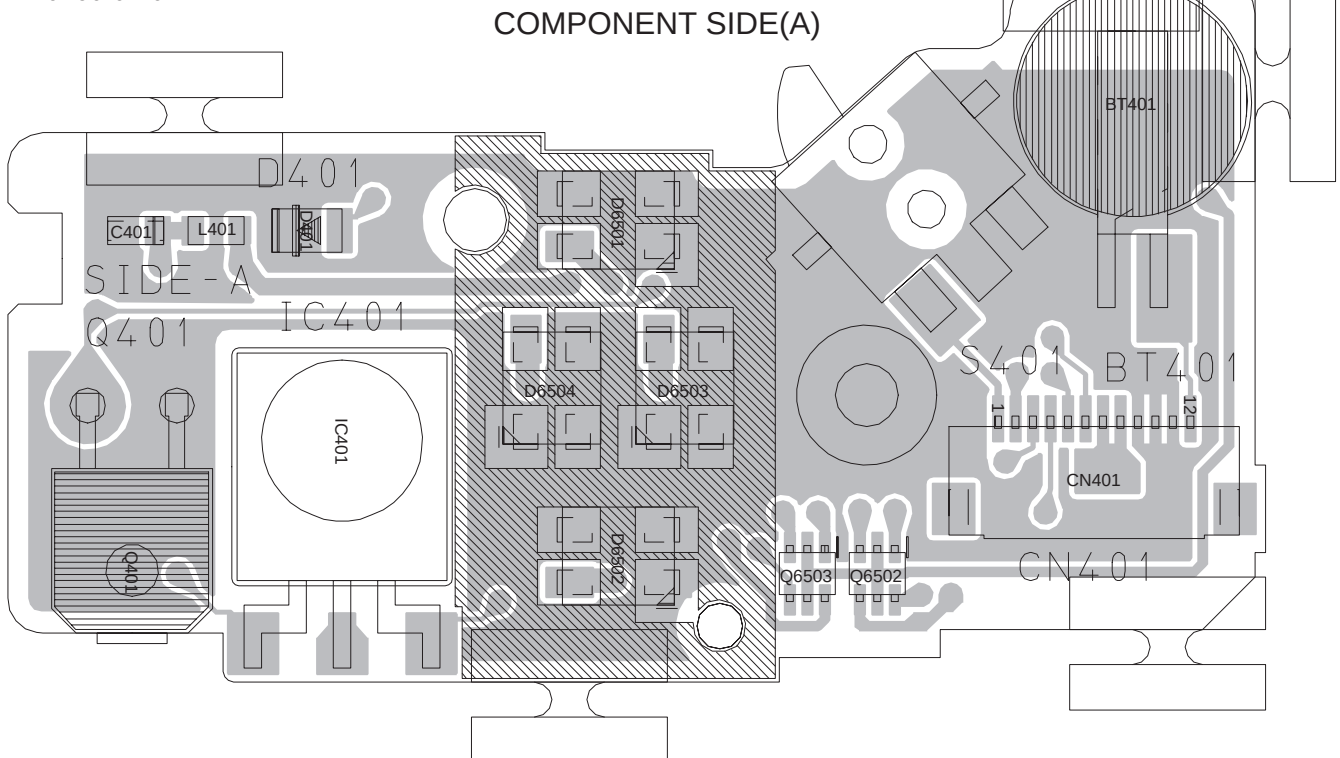


## FRONT CIRCUIT BOARD

<04> FRONT  
YB10460-01-01

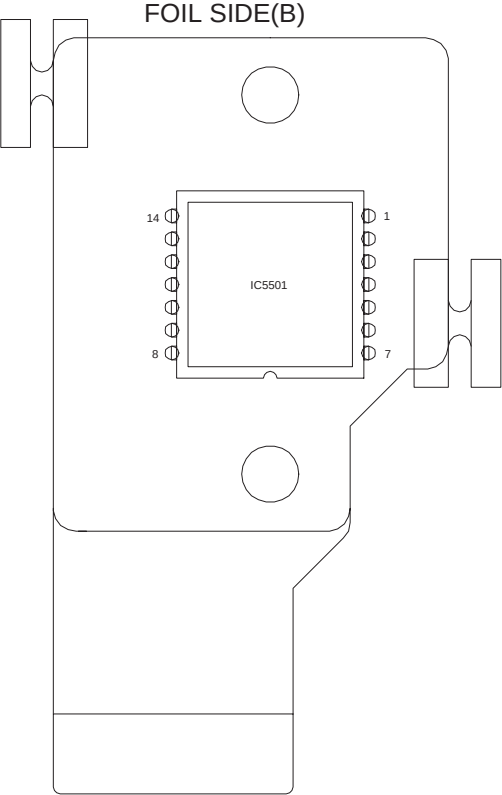


<04> FRONT  
YB10460-01-01

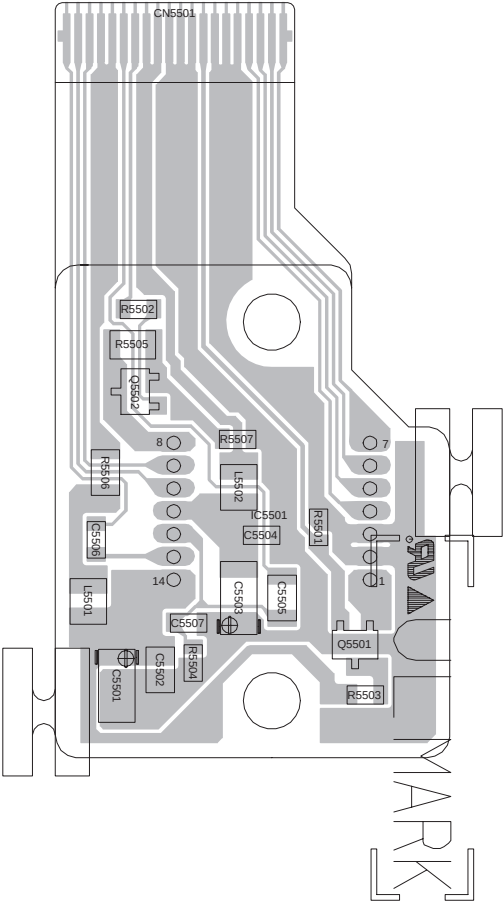


■ CCD CIRCUIT BOARD

<02> CCD  
YB10458-01-01

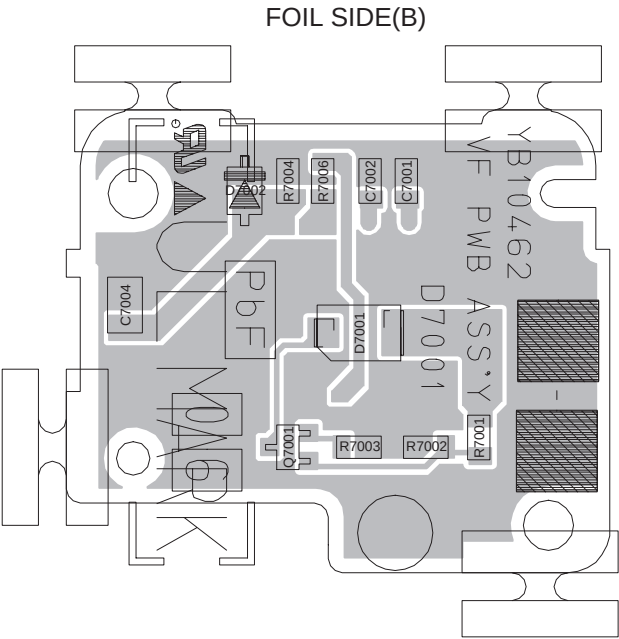


COMPONENT SIDE(A)

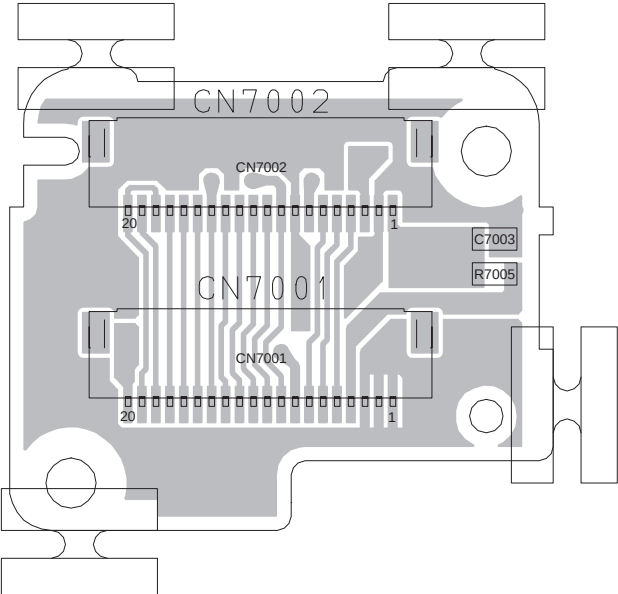


■ VF CIRCUIT BOARD

<06> VF  
YB10462



COMPONENT SIDE(A)

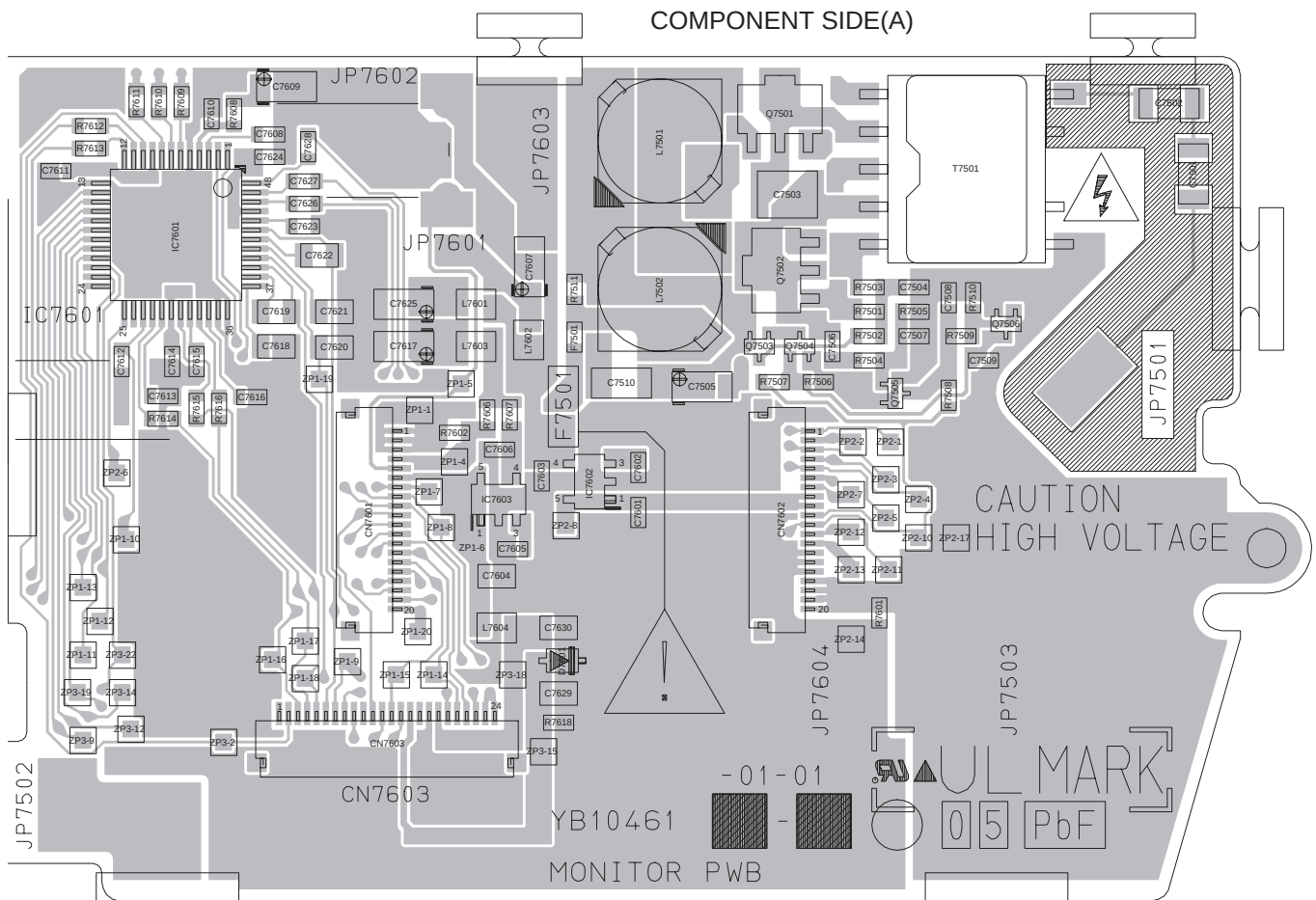
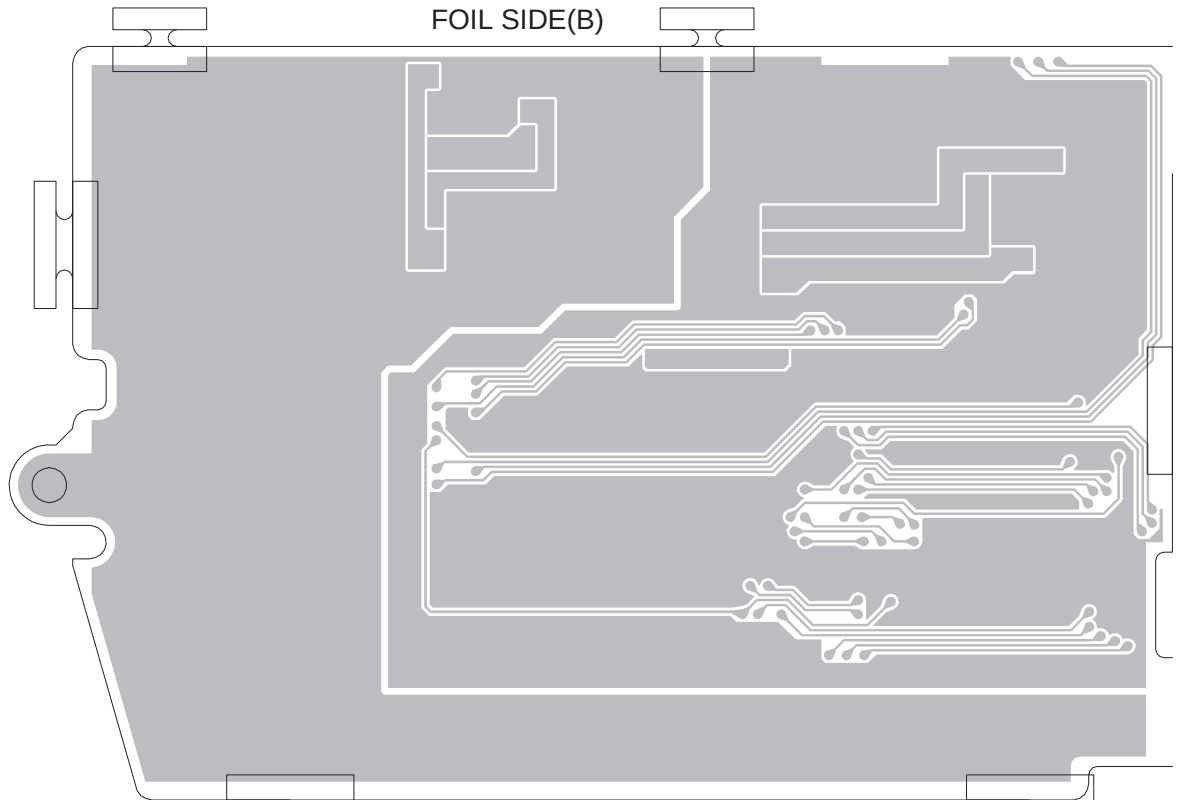


# ■ MONITOR CIRCUIT BOARD

<05> MONITOR  
YB10461-01-01

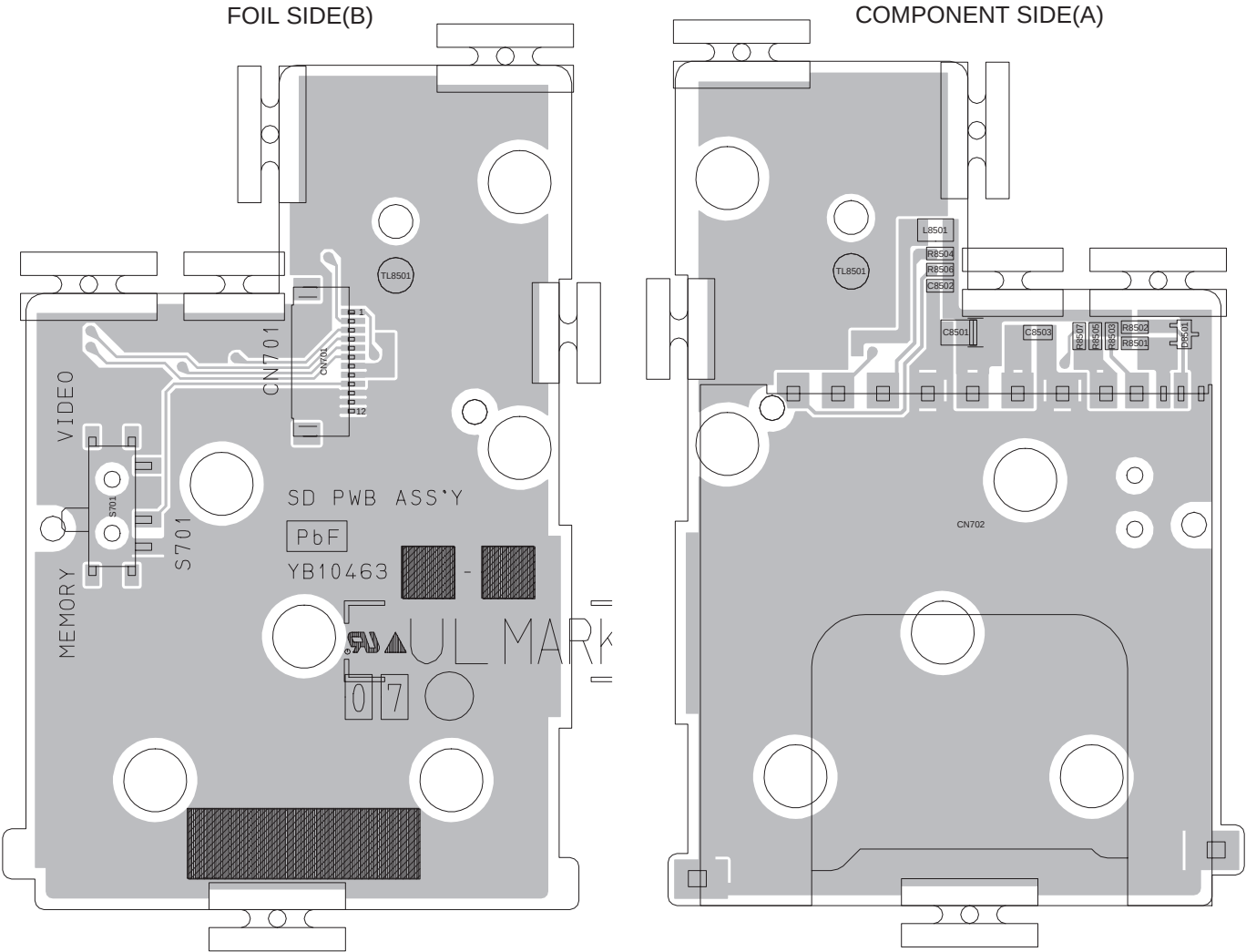


CAUTION :  
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE AND RATED FUSE(S).  
ATTENTION :  
POUR UNE PROTECTION PERMANENTE CONTRE LES RISQUE D'INCENDIE,  
REMPLACER LES FUSIBLES PAR UN AUTRE DE MEME TYPE ET DE MEME TENSION.



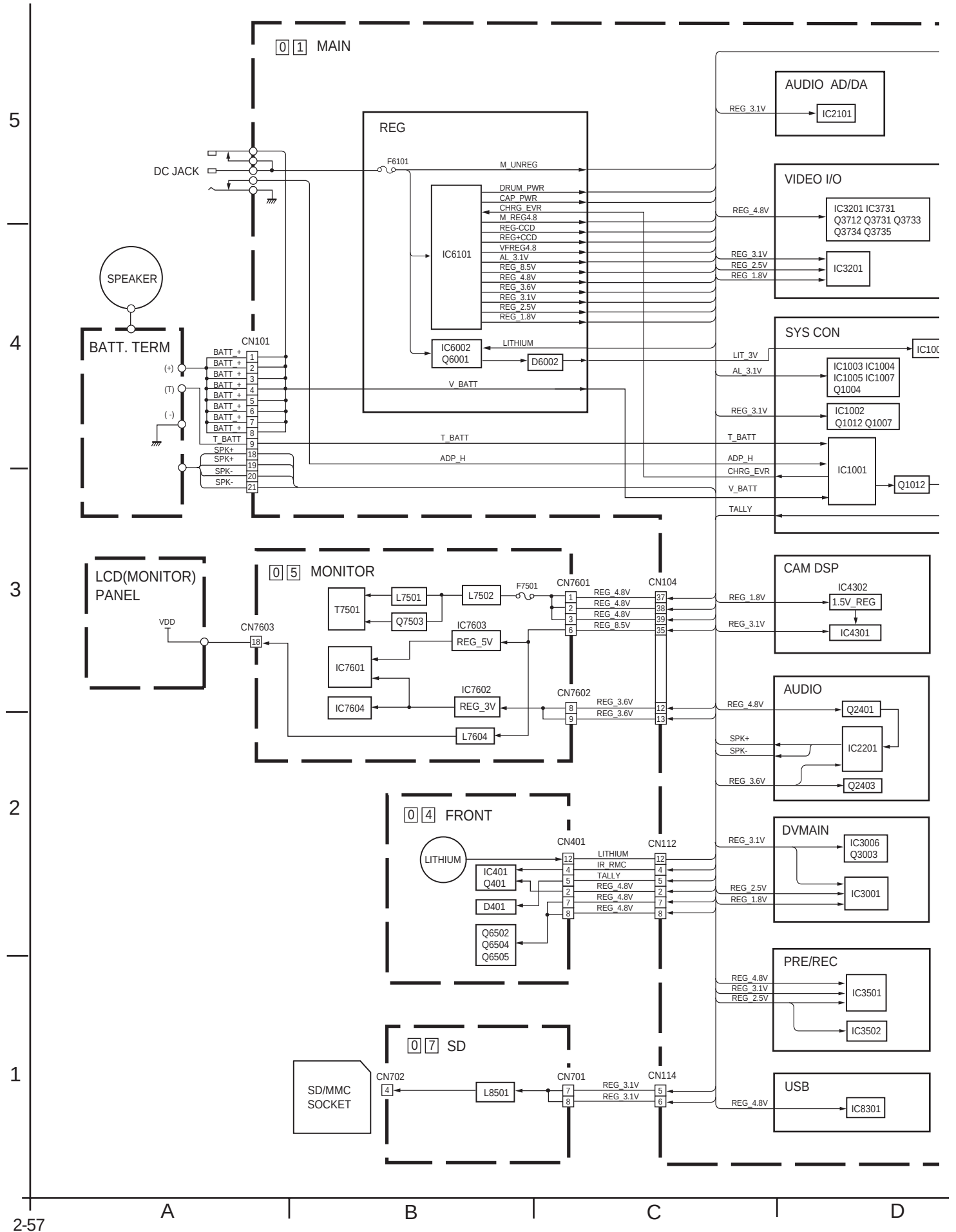
SD CIRCUIT BOARD

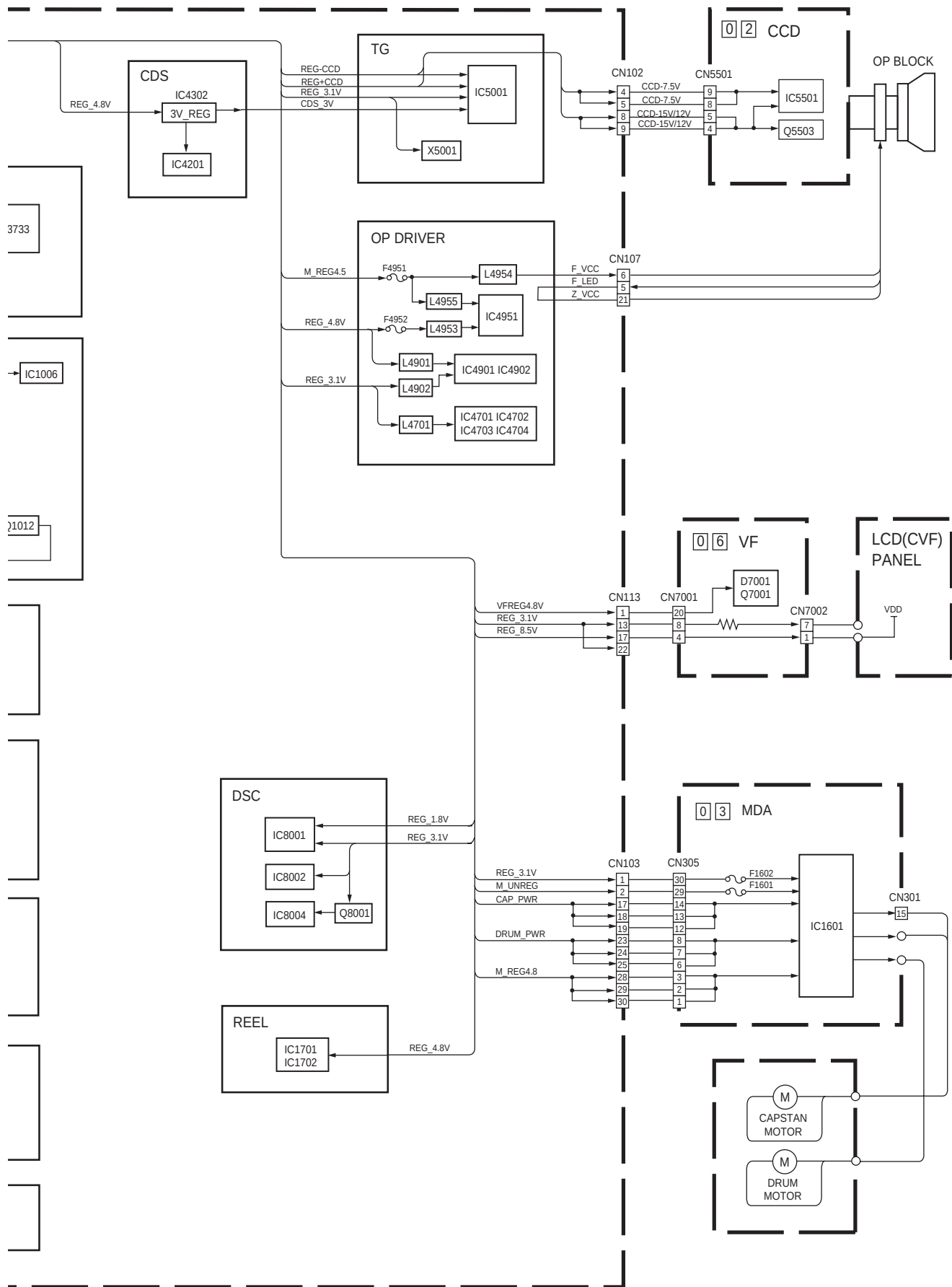
<07> SD  
YB10463



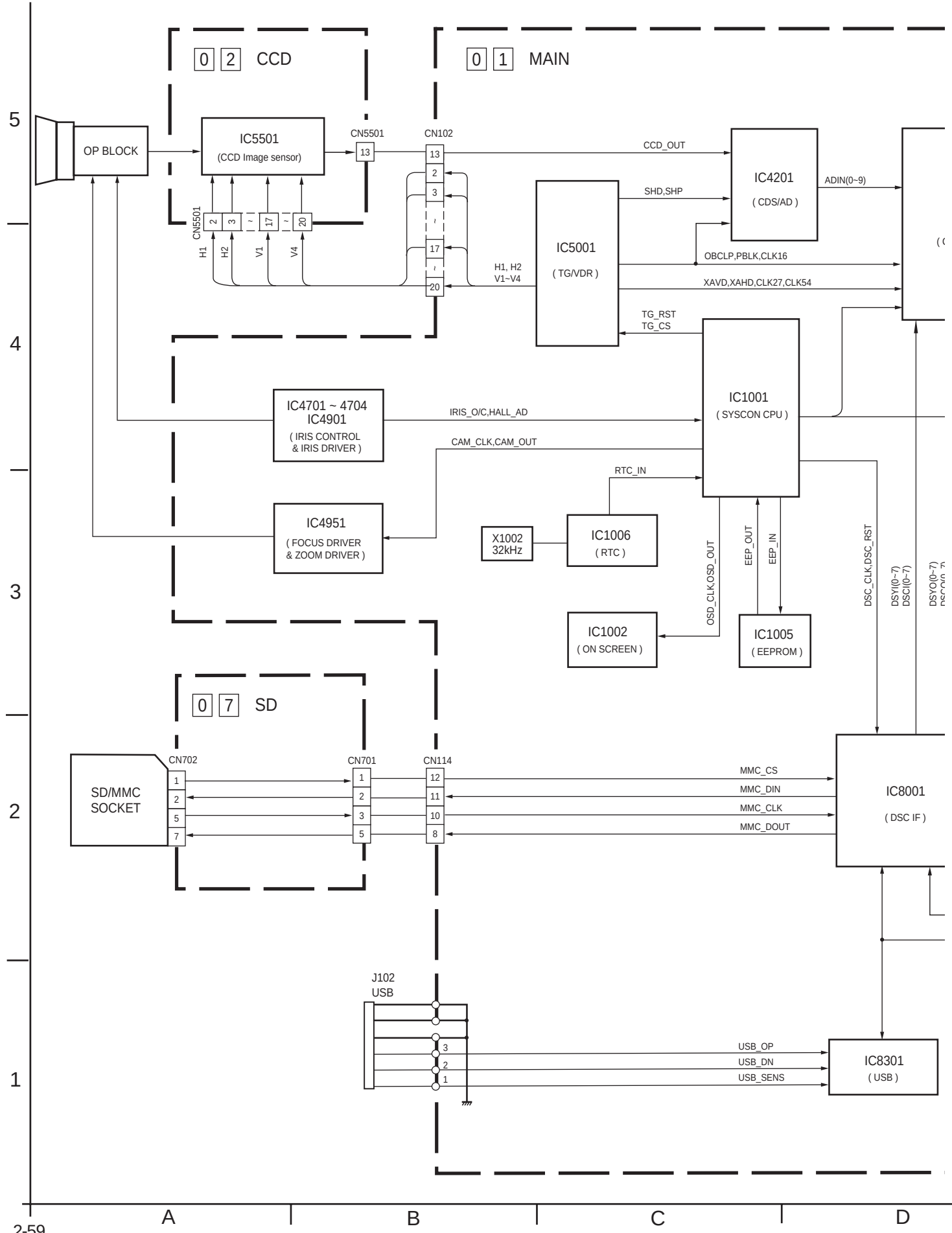


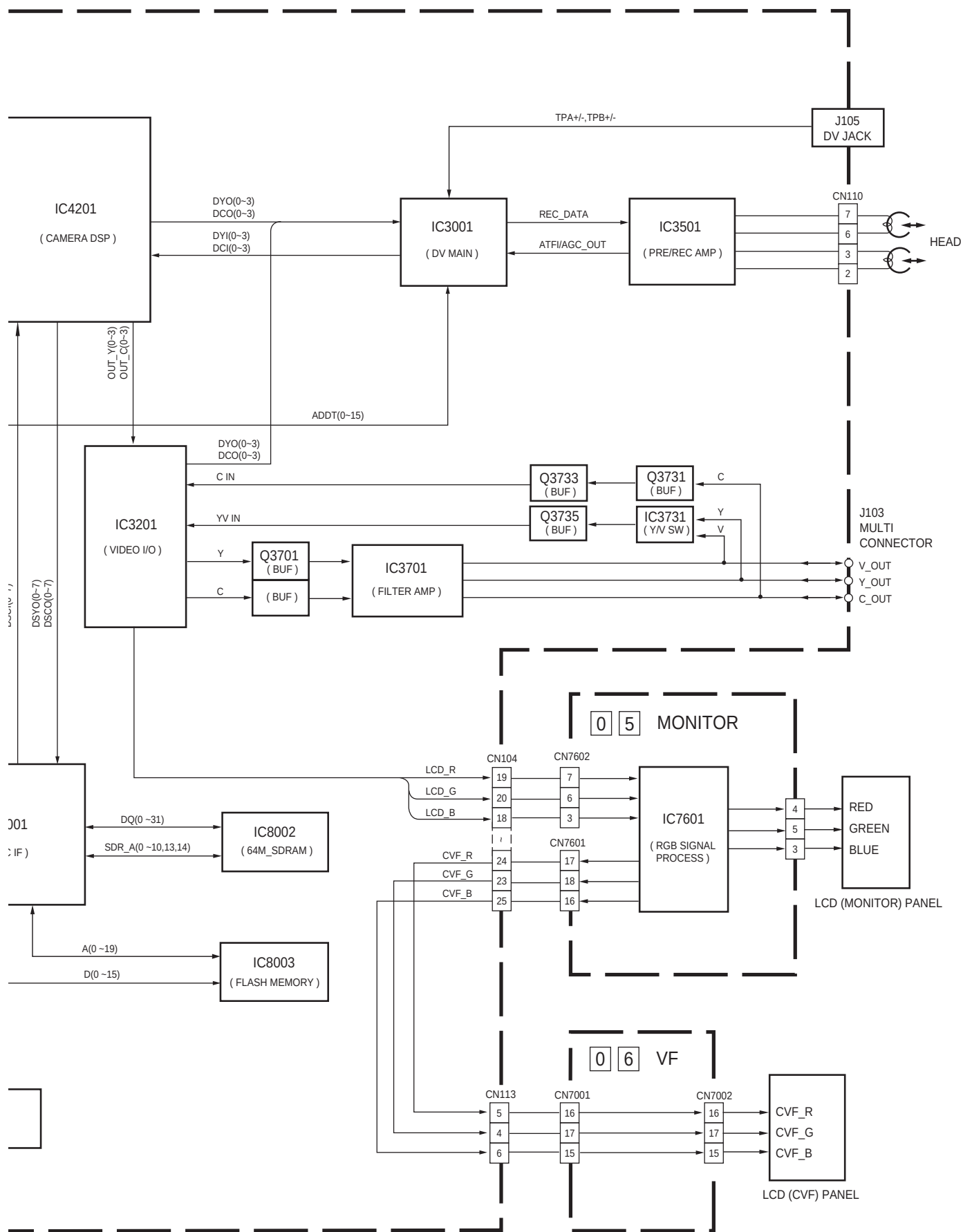
# ■ POWER SYSTEM BLOCK DIAGRAM





■ VIDEO SYSTEM BLOCK DIAGRAM





# ■ VOLTAGE CHARTS

| <MAIN IF>    |     |      | <CPU>        |      |      | <AUDIO>      |     |      | <DV MAIN>    |     |      | <VIDEO I/O>  |     |      | <CDS>        |     |      | <OP DRIVER>  |     |      | <MODE PIN NO. R> |   |
|--------------|-----|------|--------------|------|------|--------------|-----|------|--------------|-----|------|--------------|-----|------|--------------|-----|------|--------------|-----|------|------------------|---|
| MODE PIN NO. | REC | PLAY | MODE PIN NO. | REC  | PLAY | MODE PIN NO. | REC | PLAY | MODE PIN NO. | REC | PLAY | MODE PIN NO. | REC | PLAY | MODE PIN NO. | REC | PLAY | MODE PIN NO. | REC | PLAY | MODE PIN NO.     | R |
| Q2801        |     |      | IC1001       | -    | -    | Q1010        |     |      | IC3001       | -   | -    | IC3201       | -   | -    | IC4201       |     |      | IC4701       |     |      | 62               |   |
| 1            | 0   | 0    | IC1002       |      |      | E            | 0   | 0    | IC3006       |     |      | IC3701       |     |      | 1            | 1.1 | 0    | 1            | 2.4 | 2.5  | 63               |   |
| 2            | 0   | 0    | 1            | 2.8  | 2.8  | C            | 3.0 | 3.0  | 1            | 0   | 0.4  | 2            | 0   | 0    | 2            | 0.8 | 3.0  | 2            | 1.9 | 2.0  | 64               |   |
| 3            | 0   | 0    | 2            | 2.4  | 2.4  | B            | 0   | 0    | 2            | 0   | 0.4  | 3            | 0   | 0    | 3            | 0.4 | 3.0  | 3            | 1.9 | 2.0  | IC4902           |   |
| 4            | 0   | 0    | 3            | 2.7  | 2.7  | Q1011        |     |      | 3            | 0   | 0    | 4            | 0   | 0    | 4            | 0   | 0    | 4            | 0   | 0    | 1                |   |
| 5            | 0   | 0    | 4            | 3.0  | 3.0  | E            | 0   | 0    | 4            | 2.1 | 2.2  | 4            | 0   | 0    | 5            | 0   | 3.0  | 5            | 1.9 | 1.9  | 2                |   |
| 6            | 0   | 0    | 5            | 3.0  | 3.1  | C            | 0.1 | 0.2  | 5            | 0.9 | 0.9  | 5            | 0   | 0    | 6            | 0   | 0    | 6            | 1.9 | 1.9  | 3                |   |
|              |     |      | 6            | 3.0  | 3.1  | B            | 0   | 0    | 6            | 0   | 0    | 6            | 0   | 0    | 7            | 0   | 0    | 7            | 0   | 1.9  | 4                |   |
|              |     |      | 7            | 0    | 0    | Q1012        |     |      | 7            | 3.0 | 3.1  | 7            | 0   | 0    | 8            | 0   | 0    | 8            | 4.7 | 4.8  | 5                |   |
|              |     |      | 8            | 1.4  | 1.5  | 1            | 0   | 0    | 8            | 1.2 | 1.7  | 8            | 0   | 0    | 9            | 1.0 | 0    | IC4702       |     |      | 6                |   |
|              |     |      | 9            | 0    | 0    | 2            | 3.0 | 0    | 9            | 4.7 | 4.8  | 9            | 4.7 | 4.8  | 10           | 3.0 | 3.0  | 1            | 0.7 | 0.8  | 7                |   |
|              |     |      | 10           | 0    | 0    | 3            | 3.0 | 0    | 10           | 0   | 0    | 10           | 0   | 0    | 11           | 0   | 0    | 2            | 0.1 | 0.2  | 8                |   |
|              |     |      | 11           | 0    | 0    | 4            | 3.0 | 3.0  | C            | 2.9 | 2.9  | 11           | 0   | 0    | 12           | 1.4 | 1.4  | 3            | 0.2 | 0.2  | IC4951           |   |
|              |     |      | 12           | 0    | 0    | 5            | 0   | 3.1  | B            | 2.4 | 2.4  | 12           | 0   | 0    | 13           | 2.9 | 3.0  | 4            | 0   | 0    | 1                |   |
|              |     |      | 13           | 0    | 0    | 6            | 0   | 0    | Q3003        |     |      | 13           | 0   | 0    | 14           | 2.5 | 0    | 5            | 1.9 | 2.0  | 2                |   |
|              |     |      | 14           | 0    | 0    |              |     |      | E            | 0.7 | 1.2  | 14           | 2.3 | 1.2  | 15           | 3.0 | 0    | 6            | 1.9 | 1.9  | 3                |   |
|              |     |      | 15           | 0    | 0    |              |     |      | C            | 2.9 | 3.1  | 15           | 4.7 | 4.8  | 16           | 2.3 | 0    | 7            | 2.0 | 0.6  | 4                |   |
|              |     |      | 16           | 0    | 0    |              |     |      | B            | 1.3 | 1.7  | 16           | 0   | 0    | 17           | 2.3 | 0    | 8            | 4.7 | 4.7  | 5                |   |
|              |     |      | 17           | 0    | 0    |              |     |      |              |     |      | IC3731       |     |      | 18           | 0   | 0    | IC4703       |     |      | 6                |   |
|              |     |      | 18           | 0    | 0    |              |     |      |              |     |      | 1            | 3.0 | 3.0  | 19           | 2.9 | 3.0  | 1            | 0.9 | 0    | 7                |   |
|              |     |      | 19           | 2.9  | 3.0  |              |     |      |              |     |      | 2            | 1.1 | 1.2  | 20           | 1.9 | 0    | 2            | 1.9 | 0.5  | 8                |   |
|              |     |      | 20           | 2.8  | 2.8  |              |     |      |              |     |      | 3            | 4.7 | 4.8  | 21           | 1.9 | 0    | 3            | 1.9 | 0    | 9                |   |
|              |     |      | IC1003       |      |      |              |     |      |              |     |      | 4            | 1.3 | 1.3  | 22           | 1.9 | 1.5  | 4            | 0   | 0    | 10               |   |
|              |     |      | 1            | 0    | 0    |              |     |      |              |     |      | 5            | 0   | 0    | 23           | 0   | 0    | 5            | 0   | 0    | 11               |   |
|              |     |      | 2            | 3.0  | 3.0  |              |     |      |              |     |      | 6            | 1.5 | 1.4  | 24           | 1.2 | 0    | 6            | 0   | 0    | 12               |   |
|              |     |      | 3            | 0    | 0    |              |     |      |              |     |      | Q3701        |     |      | 25           | 2.9 | 3.0  | 7            | 0   | 0    | 13               |   |
|              |     |      | 4            | 3.0  | 3.0  |              |     |      |              |     |      | 1            | 0.6 | 0.5  | 26           | 0   | 0    | 8            | 4.7 | 4.7  | 14               |   |
|              |     |      | 5            | 3.0  | 0    |              |     |      |              |     |      | 2            | 0   | 0    | 27           | 0   | 0    | IC4704       |     |      | 15               |   |
|              |     |      | IC1004       |      |      |              |     |      |              |     |      | 3            | 0   | 0    | 28           | 1.4 | 0    | 1            | 1.8 | 1.8  | 16               |   |
|              |     |      | 1            | 1.4  | 1.4  |              |     |      |              |     |      | 4            | 1.3 | 1.3  | 29           | 1.9 | 0    | 2            | 1.8 | 2.0  | 17               |   |
|              |     |      | 2            | 0    | 0    |              |     |      |              |     |      | 5            | 0.7 | 0.7  | 30           | 0.8 | 0    | 3            | 1.9 | 2.0  | 18               |   |
|              |     |      | 3            | 1.2  | 1.2  |              |     |      |              |     |      | 6            | 0   | 0    | 31           | 2.9 | 3.0  | 4            | 0   | 0    | 19               |   |
|              |     |      | 4            | 0    | 0    |              |     |      |              |     |      | Q3702        |     |      | 32           | 0   | 0    | 5            | 2.0 | 2.0  | 20               |   |
|              |     |      | 5            | 3.0  | 3.1  |              |     |      |              |     |      | 1            | 0   | 0    | 33           | 3.0 | 3.1  | 6            | 1.8 | 2.0  | 21               |   |
|              |     |      | IC1005       |      |      |              |     |      |              |     |      | 2            | 0   | 0    | 34           | 3.0 | 3.0  | 7            | 2.0 | 2.2  | 22               |   |
|              |     |      | 1            | 3.0  | 3.1  |              |     |      |              |     |      | 3            | 0   | 0    | 35           | 3.0 | 3.0  | 8            | 4.7 | 4.7  | 23               |   |
|              |     |      | 2            | 0    | 0    |              |     |      |              |     |      | 4            | 4.7 | 4.8  | 36           | 1.2 | 0    | IC4901       |     |      | 24               |   |
|              |     |      | 3            | 3.0  | 3.1  |              |     |      |              |     |      | 5            | 4.3 | 4.3  | IC4202       |     |      | 1            | 0   | 0    | 25               |   |
|              |     |      | 4            | 0    | 0    |              |     |      |              |     |      | 6            | 4.3 | 4.3  | 1            | 4.7 | 4.8  | 2            | 0   | 0    | 26               |   |
|              |     |      | 5            | 3.0  | 3.1  |              |     |      |              |     |      | Q3704        |     |      | 2            | 0   | 0    | 3            | 0   | 0    | 27               |   |
|              |     |      | 6            | 3.0  | 3.0  |              |     |      |              |     |      | E            | 0.7 | 0.7  | 3            | 1.2 | 1.3  | 4            | 3.0 | 3.0  | 28               |   |
|              |     |      | 7            | 3.0  | 3.1  |              |     |      |              |     |      | C            | 0   | 0    | 4            | 2.9 | 3.0  | 5            | 3.0 | 3.0  | 29               |   |
|              |     |      | 8            | 3.0  | 3.0  |              |     |      |              |     |      | B            | 0   | 0    | 5            | 4.7 | 4.8  | 6            | 0   | 0.3  | 30               |   |
|              |     |      | IC1006       |      |      |              |     |      |              |     |      | Q3705        |     |      |              |     |      | 7            | 0   | 0.1  | 31               |   |
|              |     |      | 1            | 0    | 0    |              |     |      |              |     |      | 1            | 0.7 | 0.6  |              |     |      | 8            | 3.0 | 3.1  | 32               |   |
|              |     |      | 2            | 3.0  | 3.0  |              |     |      |              |     |      | 2            | 0   | 0    |              |     |      | 9            | 3.0 | 3.0  | 33               |   |
|              |     |      | 3            | 3.0  | 3.0  |              |     |      |              |     |      | 3            | 0   | 0    |              |     |      | 10           | 1.5 | 1.5  | 34               |   |
|              |     |      | 4            | 0    | 0    |              |     |      |              |     |      | 4            | 0.6 | 0.7  |              |     |      | 11           | 0   | 2.9  | 35               |   |
|              |     |      | 5            | 3.0  | 3.0  |              |     |      |              |     |      | 5            | 0   | 0    |              |     |      | 12           | 0.2 | 2.8  | 36               |   |
|              |     |      | 6            | 0.4  | 0.4  |              |     |      |              |     |      | 6            | 0   | 0    |              |     |      | 13           | 0   | 0    | 37               |   |
|              |     |      | 7            | 0.4  | 0.4  |              |     |      |              |     |      | Q3706        |     |      |              |     |      | 14           | 0   | 0    | 38               |   |
|              |     |      | 8            | 3.2  | 3.2  |              |     |      |              |     |      | E            | 0   | 0    |              |     |      | 15           | 0   | 0    | 39               |   |
|              |     |      | IC1007       |      |      |              |     |      |              |     |      | C            | 0   | 0    |              |     |      | 16           | 3.0 | 3.1  | 40               |   |
|              |     |      | 1            | 3.1  | 3.1  |              |     |      |              |     |      | B            | 0   | 0    |              |     |      | 17           | 1.4 | 1.4  | 41               |   |
|              |     |      | 2            | 3.0  | 3.0  |              |     |      |              |     |      | Q3707        |     |      |              |     |      | 18           | 1.2 | 1.2  | 42               |   |
|              |     |      | 3            | 0    | 0    |              |     |      |              |     |      | E            | 0   | 0    |              |     |      | 19           | 0.4 | 0.5  | 43               |   |
|              |     |      | 4            | 0    | 0    |              |     |      |              |     |      | C            | 0   | 0    |              |     |      | 20           | 0.3 | 0.4  | 44               |   |
|              |     |      | Q1001        |      |      |              |     |      |              |     |      | B            | 0   | 0    |              |     |      | 21           | 1.7 | 1.7  | 45               |   |
|              |     |      | E            | 3.0  | 3.1  |              |     |      |              |     |      | Q3731        |     |      |              |     |      | 22           | 1.4 | 1.4  | 46               |   |
|              |     |      | C            | 3.0  | 3.1  |              |     |      |              |     |      | E            | 0   | 0    |              |     |      | 23           | 2.3 | 2.4  | 47               |   |
|              |     |      | B            | 3.0  | 3.1  |              |     |      |              |     |      | C            | 4.7 | 4.8  |              |     |      | 24           | 0.4 | 0.4  | 48               |   |
|              |     |      | Q1002        |      |      |              |     |      |              |     |      | B            | 0   | 0    |              |     |      | 25           | 0.6 | 0.7  | Q4701            |   |
|              |     |      | 1            | 0    | 0    |              |     |      |              |     |      | Q3733        |     |      |              |     |      | 26           | 3.0 | 3.0  | E                |   |
|              |     |      | 2            | 0    | 0    |              |     |      |              |     |      | 1            | 1.7 | 1.7  |              |     |      | 27           | 0   | 0    | C                |   |
|              |     |      | 3            | 2.9  | 2.9  |              |     |      |              |     |      | 2            | 2.3 | 2.3  |              |     |      | 28           | 2.9 | 3.1  | B                |   |
|              |     |      | 4            | 3.0  | 3.1  |              |     |      |              |     |      | 3            | 2.7 | 2.8  |              |     |      | 29           | 0   | 0    | Q4951            |   |
|              |     |      | 5            | 0    | 0    |              |     |      |              |     |      | 4            | 4.7 | 4.8  |              |     |      | 30           | 4.4 | 4.6  | E                |   |
|              |     |      | 6            | 0    | 0    |              |     |      |              |     |      | 5            | 4.1 | 4.2  |              |     |      | 31           | 4.4 | 4.5  | C                |   |
|              |     |      | Q1003        |      |      |              |     |      |              |     |      | 6            | 4.1 | 4.2  |              |     |      | 32           | 4.4 | 4.5  | B                |   |
|              |     |      | 1            | 0    | 0    |              |     |      |              |     |      | Q3734        |     |      |              |     |      | 33           | 0   | 0    |                  |   |
|              |     |      | 2            | 0    | 0    |              |     |      |              |     |      | E            | 2.1 | 2.2  |              |     |      | 34           | 0   | 0    |                  |   |
|              |     |      | 3            | -0.1 | -0.2 |              |     |      |              |     |      | C            | 4.7 | 4.8  |              |     |      | 35           | 0   | 0    |                  |   |
|              |     |      | 4            | 3.0  | 3.1  |              |     |      |              |     |      | B            | 2.7 | 2.7  |              |     |      | 36           | 0   | 0    |                  |   |
|              |     |      | 5            | 3.0  | 3.0  |              |     |      |              |     |      | Q3735        |     |      |              |     |      | 37           | 2.2 | 0    |                  |   |
|              |     |      | 6            | 3.0  | 3.0  |              |     |      |              |     |      | 1            | 0   | 0    |              |     |      | 38           | 0   | 2.4  |                  |   |
|              |     |      | Q1004        |      |      |              |     |      |              |     |      | 2            | 0   | 0    |              |     |      | 39           | 0   | 0    |                  |   |
|              |     |      | 1            | 0    | 0    |              |     |      |              |     |      | 3            | 0   | 0    |              |     |      | 40           | 3.0 | 4.7  |                  |   |
|              |     |      | 2            | 3.0  | 3.1  |              |     |      |              |     |      | 4            | 1.4 | 1.4  |              |     |      | 41           | 0   | 0    |                  |   |
|              |     |      | 3            | 3.0  | 3.1  |              |     |      |              |     |      | 5            | 0.8 | 0.9  |              |     |      | 42           | 2.6 | 4.7  |                  |   |
|              |     |      | 4            | 3.0  | 3.1  |              |     |      |              |     |      | 6            | 4.7 | 4.7  |              |     |      | 43           | 0   | 0    |                  |   |
|              |     |      | 5            | 0    | 0    |              |     |      |              |     |      |              |     |      |              |     |      | 44           | 0   | 4.7  |                  |   |
|              |     |      | 6            | 0    | 0    |              |     |      |              |     |      |              |     |      |              |     |      | 45           | 0   | 0    |                  |   |
|              |     |      | Q1005        |      |      |              |     |      |              |     |      |              |     |      |              |     |      | 46           | 4.6 | 4.8  |                  |   |
|              |     |      | E            | 0    | 0    |              |     |      |              |     |      |              |     |      |              |     |      | 47           | 0   | 0    |                  |   |
|              |     |      | C            | 0.2  | 0.2  |              |     |      |              |     |      |              |     |      |              |     |      | 48           | 0   | 0.2  |                  |   |
|              |     |      | B            | 0    | 0    |              |     |      |              |     |      |              |     |      |              |     |      | 49           | 4.4 | 4.5  |                  |   |
|              |     |      | Q1007        |      |      |              |     |      |              |     |      |              |     |      |              |     |      | 50           | 3.1 | 4.2  |                  |   |
|              |     |      | E            | 0    | 0    |              |     |      |              |     |      |              |     |      |              |     |      | 51           | 3.1 | 4.2  |                  |   |
|              |     |      | C            | 3.1  | 3.0  |              |     |      |              |     |      |              |     |      |              |     |      | 52           | 0   | 2.4  |                  |   |
|              |     |      | B            | 0.5  | 0.5  |              |     |      |              |     |      |              |     |      |              |     |      | 53           | 0.9 | 1.0  |                  |   |
|              |     |      | Q1008        |      |      |              |     |      |              |     |      |              |     |      |              |     |      | 54           | 2.4 | 2.4  |                  |   |
|              |     |      | E            | 0    | 0    |              |     |      |              |     |      |              |     |      |              |     |      | 55           | 2.3 | 2.3  |                  |   |
|              |     |      | C            | 0    | 0    |              |     |      |              |     |      |              |     |      |              |     |      |              |     |      |                  |   |

| ODE<br>N NO.    | REC | PLAY | <TG>            |      |      | <REG>           |      |      | <DSC>           |      |       | <MDA>           |      |      | <FRONT>         |      |      | <MONITOR>       |      | <CCD>           |      |  |
|-----------------|-----|------|-----------------|------|------|-----------------|------|------|-----------------|------|-------|-----------------|------|------|-----------------|------|------|-----------------|------|-----------------|------|--|
| MODE<br>PIN NO. | REC | PLAY | MODE<br>PIN NO. | REC  | PLAY | MODE<br>PIN NO. | REC  | PLAY | MODE<br>PIN NO. | REC  | PLAY  | MODE<br>PIN NO. | REC  | PLAY | MODE<br>PIN NO. | REC  | PLAY | MODE<br>PIN NO. | EE   | MODE<br>PIN NO. | EE   |  |
| 62              | 1.5 | 1.4  | IC5001          |      |      | IC6001          |      |      | IC8001          | -    | -     | IC1601          |      |      | IC401           |      |      | IC7601          |      | IC5501          |      |  |
| 63              | 3.2 | 3.2  | 1               | 0    | 0    | 1               | 11.0 | 11.0 | IC8002          | -    | -     | 1               | 0    | 0    | 1               | 4.3  | 4.4  | 1               | 3.0  | 1               | 12.1 |  |
| 64              | 2.7 | 2.7  | 2               | 3.0  | 3.0  | 2               | 0    | 0    | IC8003          | -    | -     | 2               | 0.5  | 0.4  | 2               | 0    | -0.1 | 2               | 2.8  | 2               | 0    |  |
| 4902            |     |      | 3               | 3.0  | 3.0  | 3               | 3.3  | 3.3  | IC8004          |      |       | 3               | 0.2  | 0.4  | 3               | 4.7  | 4.6  | 3               | 3.0  | 3               | 0    |  |
| 1               | 2.4 | 2.9  | 4               | 3.0  | 3.0  | IC6002          |      |      | 1               | 0.7  | 0.7   | 4               | 0    | 0    | Q401            |      |      | 4               | 1.6  | 4               | -0.4 |  |
| 2               | 2.3 | 2.4  | 5               | 0    | 0    | 1               | 8.1  | 8.1  | 2               | 0    | 0     | 5               | 0.4  | 0.5  | 1               | 4.6  | 4.6  | 5               | 0    | 5               | -0.4 |  |
| 3               | 2.3 | 2.3  | 6               | 3.0  | 3.1  | 2               | 0    | 0    | 3               | 0.2  | 0.5   | 6               | 0    | 0    | 2               | -    | -    | 6               | 3.1  | 6               | -7.5 |  |
| 4               | 0   | 0    | 7               | 0.2  | 0    | 3               | 1.0  | 1.0  | 4               | 0.3  | 0.4   | 7               | 0    | 0    | 3               | -0.1 | -0.1 | 7               | 3.1  | 7               | -7.5 |  |
| 5               | 2.4 | 2.4  | 8               | 0.4  | 0    | 4               | 7.6  | 7.6  | 5               | 0.5  | 0.6   | 8               | 1.5  | 1.5  | Q6501           |      |      | 8               | 3.1  | 8               | 9.6  |  |
| 6               | 0   | 2.4  | 9               | 0    | 0    | 5               | 11.0 | 11.0 | 6               | 0    | 0     | 9               | 1.5  | 1.5  | E               | -0.1 | -0.1 | 9               | 3.1  | 9               | 1.3  |  |
| 7               | 2.3 | 1.8  | 10              | 3.0  | 3.0  | IC6101          |      |      | 7               | 0.2  | 0.1   | 10              | 1.5  | 1.5  | C               | 4.3  | 4.3  | 10              | 3.1  | 10              | 1.6  |  |
| 8               | 4.7 | 4.8  | 11              | 1.6  | 0    | 1               | 3.1  | 3.1  | 8               | 0    | 0     | 11              | 1.5  | 1.5  | B               | -0.1 | -0.1 | 11              | 1.5  | 11              | -8.0 |  |
| 4951            |     |      | 12              | 3.0  | 3.1  | 2               | 3.1  | 3.1  | 9               | 0    | 0     | 12              | 1.5  | 1.5  | Q6502           |      |      | 12              | 1.5  | 12              | 9.5  |  |
| 1               | 0.6 | 0.7  | 13              | 0    | 0    | 3               | 3.1  | 3.1  | 10              | 0    | 0     | 13              | 1.5  | 1.5  | 1               | 4.7  | 4.7  | 13              | 0    | 13              | 14.2 |  |
| 2               | 0.1 | 0.1  | 14              | 1.3  | 0    | 4               | 0.6  | 0.6  | 11              | 0    | 0     | 14              | 2.7  | 2.8  | 2               | 4.3  | 4.3  | 14              | 0    | 14              | 14.9 |  |
| 3               | 1.5 | 1.5  | 15              | 0    | 0    | 5               | 3.1  | 3.1  | 12              | 0.6  | 0.7   | 15              | 1.2  | 1.2  | 3               | 0    | 0    | 15              | 0    | Q5501           |      |  |
| 4               | 1.5 | 1.5  | 16              | 2.9  | 3.0  | 6               | 0    | 0    | 13              | 0.3  | 0     | 16              | 1.5  | 1.5  | 4               | 4.7  | 4.7  | 16              | 0    | E               | 11.3 |  |
| 5               | 0   | 0    | 17              | 2.3  | 0    | 7               | 1.3  | 1.2  | 14              | 0.2  | 0.3   | 17              | 1.5  | 1.5  | 5               | 4.3  | 4.3  | 17              | 0.2  | C               | 15.0 |  |
| 6               | 3.0 | 3.0  | 18              | 2.3  | 0    | 8               | 11.1 | 11.1 | 15              | 0.2  | 0     | 18              | 1.5  | 1.5  | 6               | 0    | 0    | 18              | 3.1  | B               | 12.1 |  |
| 7               | 0   | 0    | 19              | 2.4  | 0    | 9               | 1.0  | 1.0  | 16              | 0.2  | 0.2   | 19              | 1.5  | 1.5  | Q6503           |      |      | 19              | 3.1  |                 |      |  |
| 8               | 3.0 | 3.0  | 20              | 0    | 0    | 10              | 1.3  | 1.2  | 17              | 0    | 0     | 20              | 0    | 1.5  | 1               | 4.7  | 4.7  | 20              | 2.8  |                 |      |  |
| 9               | 3.0 | 3.0  | 21              | 0    | 0    | 11              | 2.2  | 2.2  | 18              | 0.2  | 0.2   | 21              | 0    | 3.0  | 2               | 4.3  | 4.3  | 21              | 1.5  |                 |      |  |
| 10              | 3.0 | 3.0  | 22              | 1.3  | 1.4  | 12              | 0    | 0    | 19              | 0.6  | 0.7   | 22              | 0    | 0.7  | 3               | 0    | 0    | 22              | 0    |                 |      |  |
| 11              | 1.5 | 1.5  | 23              | 0    | 0    | 13              | 0    | 0    | 20              | 0.3  | 0     | 23              | 0    | 0.4  | 4               | 4.7  | 4.7  | 23              | 0    |                 |      |  |
| 12              | 3.0 | 3.1  | 24              | 3.0  | 3.0  | 14              | 0    | 0    | 21              | 0    | 0     | 24              | 1.4  | 0    | 5               | 4.3  | 4.3  | 24              | 0    |                 |      |  |
| 13              | 4.8 | 4.8  | 25              | 0.3  | 0.6  | 15              | 0    | 0    | 22              | 0    | 0     | 25              | 1.4  | 1.4  | 6               | 0    | 0    | 25              | 0.3  |                 |      |  |
| 14              | 0   | 0    | 26              | 3.0  | 0    | 16              | 0    | 0    | 23              | 0    | 0     | 26              | 0    | 11.0 | Q6504           |      |      | 26              | 0    |                 |      |  |
| 15              | 0   | 0    | 27              | 2.5  | 0    | 17              | 0.2  | 0.2  | 24              | 0    | 0     | 27              | 0    | 0    | E               | 4.7  | 4.7  | 27              | 1.5  |                 |      |  |
| 16              | 0   | 0    | 28              | 3.0  | 0    | 18              | 0    | 0    | 25              | 0.2  | 0.2   | 28              | 2.7  | 2.8  | C               | 4.3  | 4.3  | 28              | 2.5  |                 |      |  |
| 17              | 0.2 | 0.3  | 29              | 0    | 0    | 19              | 2.2  | 2.2  | 26              | 0.6  | 0.7   | 29              | 0.7  | 0.6  | B               | 4.3  | 4.3  | 29              | 1.5  |                 |      |  |
| 18              | 4.7 | 4.8  | 30              | 0.2  | 2.8  | 20              | 0.9  | 0.9  | 27              | 0.3  | 0.4   | 30              | 0    | 0    | 30              | 0    | 0    | 30              | 4.7  |                 |      |  |
| 19              | 0   | 0    | 31              | 0    | 2.9  | 21              | 0    | 0    | 28              | 0    | 0     | 31              | 0    | 0.6  | 31              | 0    | 0.6  | 31              | 2.5  |                 |      |  |
| 20              | 0   | 0    | 32              | 3.0  | 0    | 22              | 2.2  | 2.2  | 29              | 0    | 0     | 32              | 1.0  | 1.0  | 32              | 1.0  | 1.0  | 32              | 1.4  |                 |      |  |
| 21              | 0   | 0    | 33              | 3.1  | 3.1  | 23              | 1.0  | 1.0  | 30              | 0.7  | 0.7   | 33              | 1.2  | 1.3  | 33              | 1.2  | 1.3  | 33              | 2.5  |                 |      |  |
| 22              | 0.2 | 0.2  | 34              | 1.5  | 0    | 24              | 0.6  | 0.6  | 31              | 0.3  | 0.3   | 34              | 1.2  | 1.3  | 34              | 1.2  | 1.3  | 34              | 1.5  |                 |      |  |
| 23              | 0.2 | 0.3  | 35              | 1.4  | 1.4  | 25              | 1.0  | 1.0  | 32              | 0.3  | 0.3   | 35              | 1.3  | 1.3  | 35              | 1.3  | 1.3  | 35              | 0    |                 |      |  |
| 24              | 0   | 0    | 36              | 3.0  | 3.1  | 26              | 0.6  | 0.6  | 33              | 0.6  | 0.6   | 36              | 0    | 0    | 36              | 0    | 0    | 36              | 0    |                 |      |  |
| 25              | 0.2 | 0.3  | 37              | 0    | 0    | 27              | 1.0  | 1.0  | 34              | 0.1  | 0.1   | 37              | 1.2  | 0    | 37              | 1.2  | 0    | 37              | 4.0  |                 |      |  |
| 26              | 4.7 | 4.8  | 38              | 0    | 0    | 28              | 0.8  | 0.8  | 35              | 0.1  | 0.1   | 38              | 0    | 0    | 38              | 0    | 0    | 38              | 2.0  |                 |      |  |
| 27              | 0   | 0    | 39              | 0    | 0    | 29              | 1.0  | 1.0  | 36              | 0.5  | 0.5   | 39              | 1.5  | 1.5  | 39              | 1.5  | 1.5  | 39              | 2.1  |                 |      |  |
| 28              | 0   | 0    | 40              | -0.3 | 0    | 30              | 0.7  | 0.7  | 37              | 0.8  | 0.8   | 40              | 0    | 0    | 40              | 0    | 0    | 40              | 2.5  |                 |      |  |
| 29              | 0   | 0    | 41              | -7.4 | 0    | 31              | 0.3  | 0.3  | 38              | 0    | 0     | 41              | 0    | 0    | 41              | 0    | 0    | 41              | 4.1  |                 |      |  |
| 30              | 0   | 0    | 42              | -0.3 | 15.1 | 32              | 0.3  | 0.3  | 39              | 1.0  | 1.0   | 42              | 0    | 0    | 42              | 0    | 0    | 42              | 2.0  |                 |      |  |
| 31              | 0   | 0    | 43              | 15.0 | 15.0 | 33              | 0.6  | 0.6  | 40              | 0    | 0     | 43              | 0    | 0    | 43              | 0    | 0    | 43              | 2.5  |                 |      |  |
| 32              | 0   | 0    | 44              | -7.4 | 15.0 | 34              | 0.1  | 0.1  | 41              | 2.4  | 2.4   | 44              | 0    | 0    | 44              | 0    | 0    | 44              | 2.0  |                 |      |  |
| 33              | 0   | 0    | 45              | -7.4 | 15.0 | 35              | 0.1  | 0.1  | 42              | 1.1  | 1.1   | 45              | 4.8  | 4.8  | 45              | 4.8  | 4.8  | 45              | 3.1  |                 |      |  |
| 34              | 0   | 0    | 46              | -7.9 | -8.1 | 36              | 0.5  | 0.5  | 43              | 0    | 0     | 46              | 1.5  | 1.5  | 46              | 1.5  | 1.5  | 46              | 2.1  |                 |      |  |
| 35              | 4.8 | 4.8  | 47              | 0    | 0    | 37              | 0.8  | 0.8  | 44              | 2.2  | 2.2   | 47              | 1.5  | 1.6  | 47              | 1.5  | 1.6  | 47              | 2.0  |                 |      |  |
| 36              | 0.2 | 0.3  | 48              | 3.0  | 3.0  | 38              | 0    | 0    | 45              | 2.2  | 2.1   | 48              | 0    | 1.5  | 48              | 0    | 1.5  | 48              | 2.1  |                 |      |  |
| 37              | 0   | 0    |                 |      |      | 39              | 1.0  | 1.0  | 46              | 2.2  | 2.2   | 49              | 1.5  | 1.5  | 49              | 1.5  | 1.5  | IC7602          |      |                 |      |  |
| 38              | 0.2 | 0.2  |                 |      |      | 40              | 0    | 0    | 47              | 9.2  | 9.2   | 50              | 0    | 0    | 50              | 0    | 0    | 1               | 3.6  |                 |      |  |
| 39              | 0.3 | 0.3  |                 |      |      | 41              | 2.4  | 2.4  | 48              | 1.0  | 1.0   | 51              | 13.9 | 14.3 | 51              | 13.9 | 14.3 | 2               | 0    |                 |      |  |
| 40              | 0   | 0    |                 |      |      | 42              | 1.1  | 1.1  | 49              | 1.0  | 1.1   | 52              | 2.4  | 2.4  | 52              | 2.4  | 2.4  | 3               | 1.3  |                 |      |  |
| 41              | 0   | 0    |                 |      |      | 43              | 0    | 0    | 50              | 2.6  | 2.4   | 53              | 12.4 | 12.5 | 53              | 12.4 | 12.5 | 4               | 3.1  |                 |      |  |
| 42              | 0   | 0    |                 |      |      | 44              | 2.2  | 2.2  | 51              | 11.1 | 11.1  | 54              | 0    | 0    | 54              | 0    | 0    | 5               | 3.6  |                 |      |  |
| 43              | 4.7 | 4.8  |                 |      |      | 45              | 2.2  | 2.1  | 52              | 0    | 0     | 55              | 0    | 0    | 55              | 0    | 0    | IC7604          |      |                 |      |  |
| 44              | 0.2 | 0.3  |                 |      |      | 46              | 2.2  | 2.2  | 53              | 0    | 0     | 56              | 0    | 0    | 56              | 0    | 0    | 1               | 3.1  |                 |      |  |
| 45              | 0   | 0    |                 |      |      | 47              | 9.2  | 9.2  | 54              | 8.7  | 8.8   | 57              | 3.1  | 3.1  | 57              | 3.1  | 3.1  | 2               | 3.1  |                 |      |  |
| 46              | 0   | 0    |                 |      |      | 48              | 1.0  | 1.0  | 55              | 7.9  | 8.0   | 58              | 2.9  | 2.9  | 58              | 2.9  | 2.9  | 3               | 0    |                 |      |  |
| 47              | 0   | 0    |                 |      |      | 49              | 1.0  | 1.1  | 56              | 0    | 0     | 59              | 0    | 0    | 59              | 0    | 0    | Q7501           |      |                 |      |  |
| 48              | 4.7 | 4.8  |                 |      |      | 50              | 2.6  | 2.4  | 57              | 9.1  | 0     | 60              | 1.1  | 1.0  | 60              | 1.1  | 1.0  | E               | 0    |                 |      |  |
| 4701            |     |      |                 |      |      | 51              | 11.1 | 11.1 | 58              | 7.7  | 7.8   | 61              | 0.3  | 0.3  | 61              | 0.3  | 0.3  | C               | 4.4  |                 |      |  |
| E               | 0.1 | 0.1  |                 |      |      | 52              | 0    | 0    | 59              | 0    | 0     | 62              | 1.5  | 1.5  | 62              | 1.5  | 1.5  | B               | -0.4 |                 |      |  |
| C               | 1.4 | 1.4  |                 |      |      | 53              | 0    | 9.9  | 60              | 1.1  | 1.1   | 63              | 0.7  | 0.7  | 63              | 0.7  | 0.7  | Q7502           |      |                 |      |  |
| B               | 0.8 | 0.8  |                 |      |      | 54              | 8.7  | 8.8  | 61              | 0    | 0     | 64              | 1.0  | 1.0  | 64              | 1.0  | 1.0  | E               | 0    |                 |      |  |
| 4951            |     |      |                 |      |      | 55              | 7.9  | 8.0  | 62              | 0    | 0     | Q1601           |      |      | 58              | 2.9  | 2.9  | C               | 4.4  |                 |      |  |
| E               | 0   | 0    |                 |      |      | 56              | 0    | 0    | 63              | 0    | 0     | 1               | 0    | 0    | 59              | 0    | 0    | B               | -0.4 |                 |      |  |
| C               | 3.4 | 3.4  |                 |      |      | 57              | 9.1  | 0    | 64              | 5.5  | 5.5   | 2               | 0    | 0    | 60              | 1.1  | 1.0  | Q7503           |      |                 |      |  |
| B               | 0   | 0    |                 |      |      | 58              | 7.7  | 7.8  | Q6001           |      |       | 3               | 4.9  | 4.8  | 61              | 0.3  | 0.3  | E               | 4.5  |                 |      |  |
|                 |     |      |                 |      |      | 59              | 0    | 0    | 1               | 0    | 0     | 4               | 0    | 0    | 62              | 1.5  | 1.5  | C               | 4.5  |                 |      |  |
|                 |     |      |                 |      |      | 60              | 1.1  | 1.1  | 2               | 11.0 | 11.0  | 5               | 4.8  | 4.8  | 63              | 0.7  | 0.7  | B               | 0    |                 |      |  |
|                 |     |      |                 |      |      | 61              | 0    | 0    | 3               | 7.5  | 7.5   |                 |      |      | 64              | 1.0  | 1.0  | Q7504           |      |                 |      |  |
|                 |     |      |                 |      |      | 62              | 0    | 0    | 4               | 3.1  | 3.1   |                 |      |      | 1               | 0    | 0    | E               | 0    |                 |      |  |
|                 |     |      |                 |      |      | 63              | 0    | 0    | 5               | 3.1  | 3.1   |                 |      |      | 2               | 0    | 0    | C               | 0    |                 |      |  |
|                 |     |      |                 |      |      | 64              | 5.5  | 5.5  | 6               | 3.1  | 3.1   |                 |      |      | 3               | 4.9  | 4.8  | B               | 0.7  |                 |      |  |
|                 |     |      |                 |      |      | Q6201           |      |      | Q6201           |      |       |                 |      |      |                 |      |      |                 |      |                 |      |  |
|                 |     |      |                 |      |      | 1               | 0    | 0    | 1               | 0    | 0     |                 |      |      |                 |      |      |                 |      |                 |      |  |
|                 |     |      |                 |      |      | 2               | 11.0 | 11.0 | 2               | 11.0 | 11.0  |                 |      |      |                 |      |      |                 |      |                 |      |  |
|                 |     |      |                 |      |      | 3               | 7.5  | 7.5  | 3               | 8.8  | 8.8   |                 |      |      |                 |      |      |                 |      |                 |      |  |
|                 |     |      |                 |      |      | 4               | 3.1  | 3.1  | 4               | 3.6  | 3.6</ |                 |      |      |                 |      |      |                 |      |                 |      |  |



**JVC SERVICE & ENGINEERING COMPANY OF AMERICA**  
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# PARTS LIST

## SAFETY PRECAUTION

Parts identified by the  $\triangle$  symbol are critical for safety. Replace only with specified part numbers.

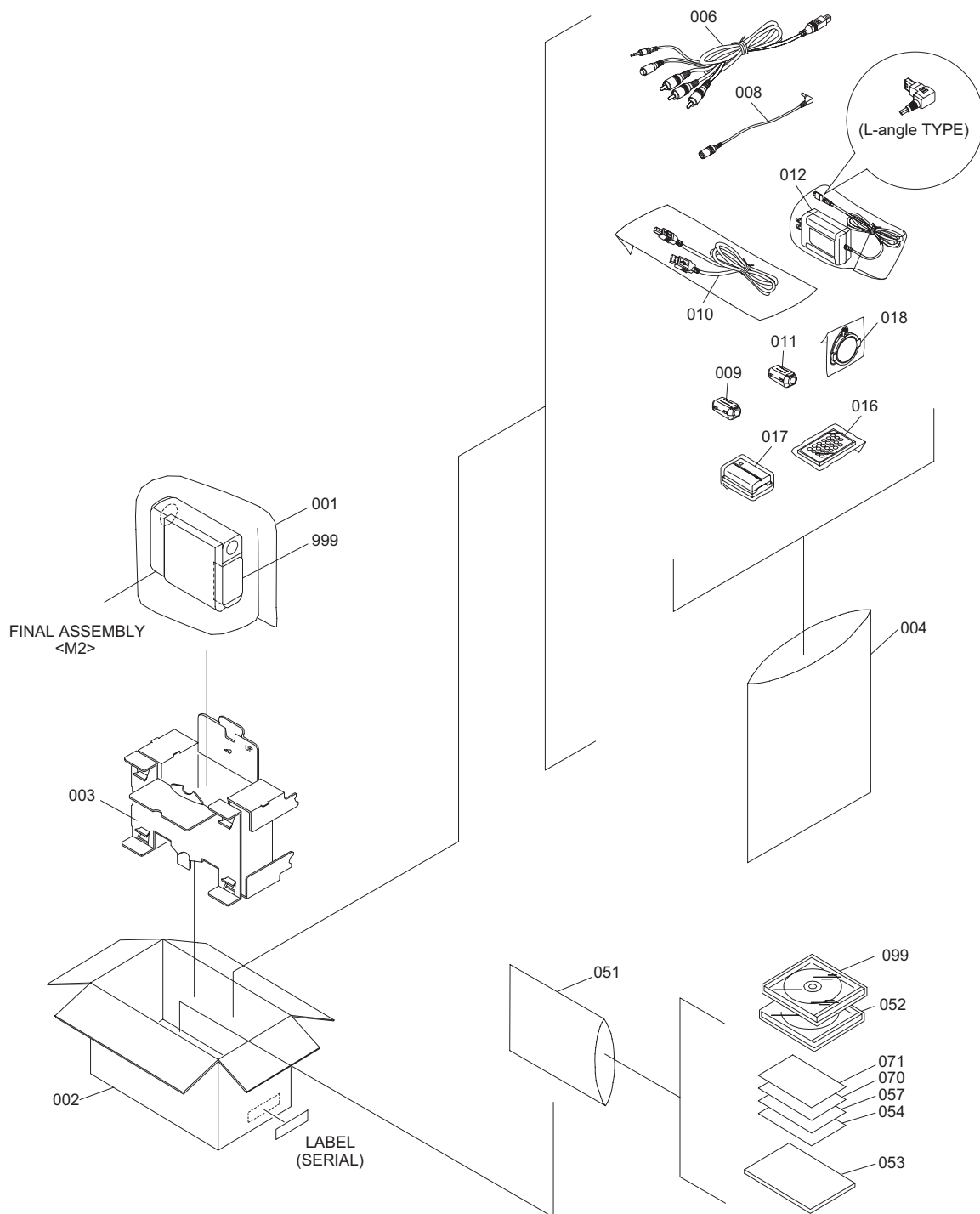
## BEWARE OF BOGUS PARTS

Parts that do not meet specifications may cause trouble in regard to safety and performance. We recommend that genuine JVC parts be used.

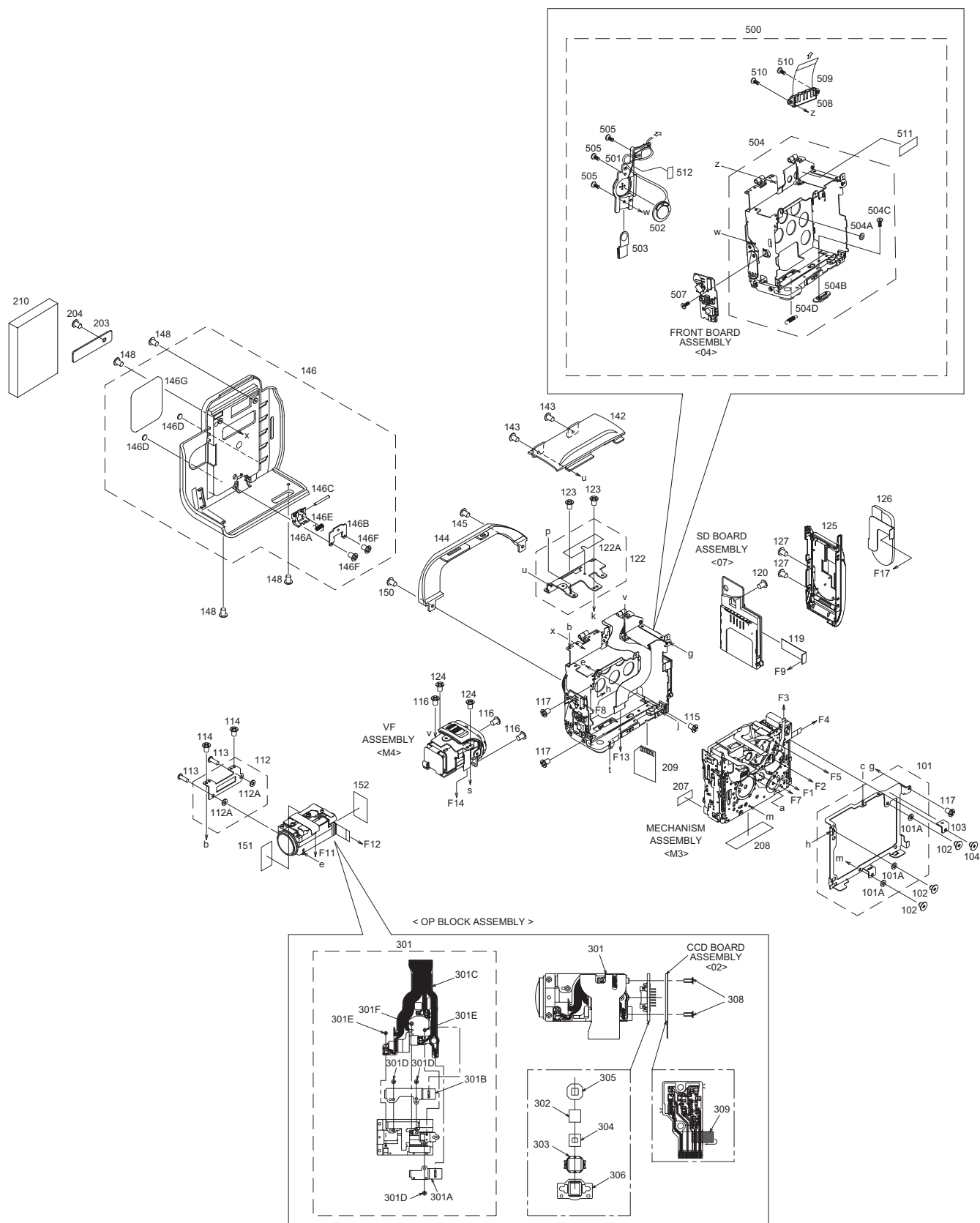
### 1. EXPLODED VIEW

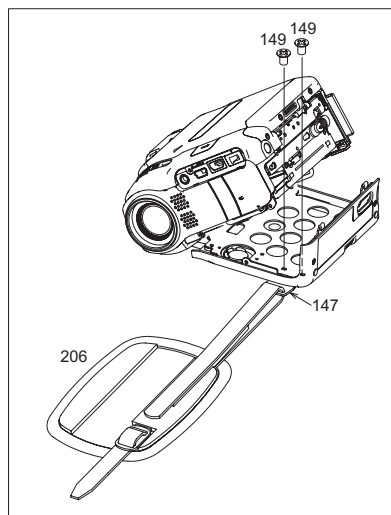
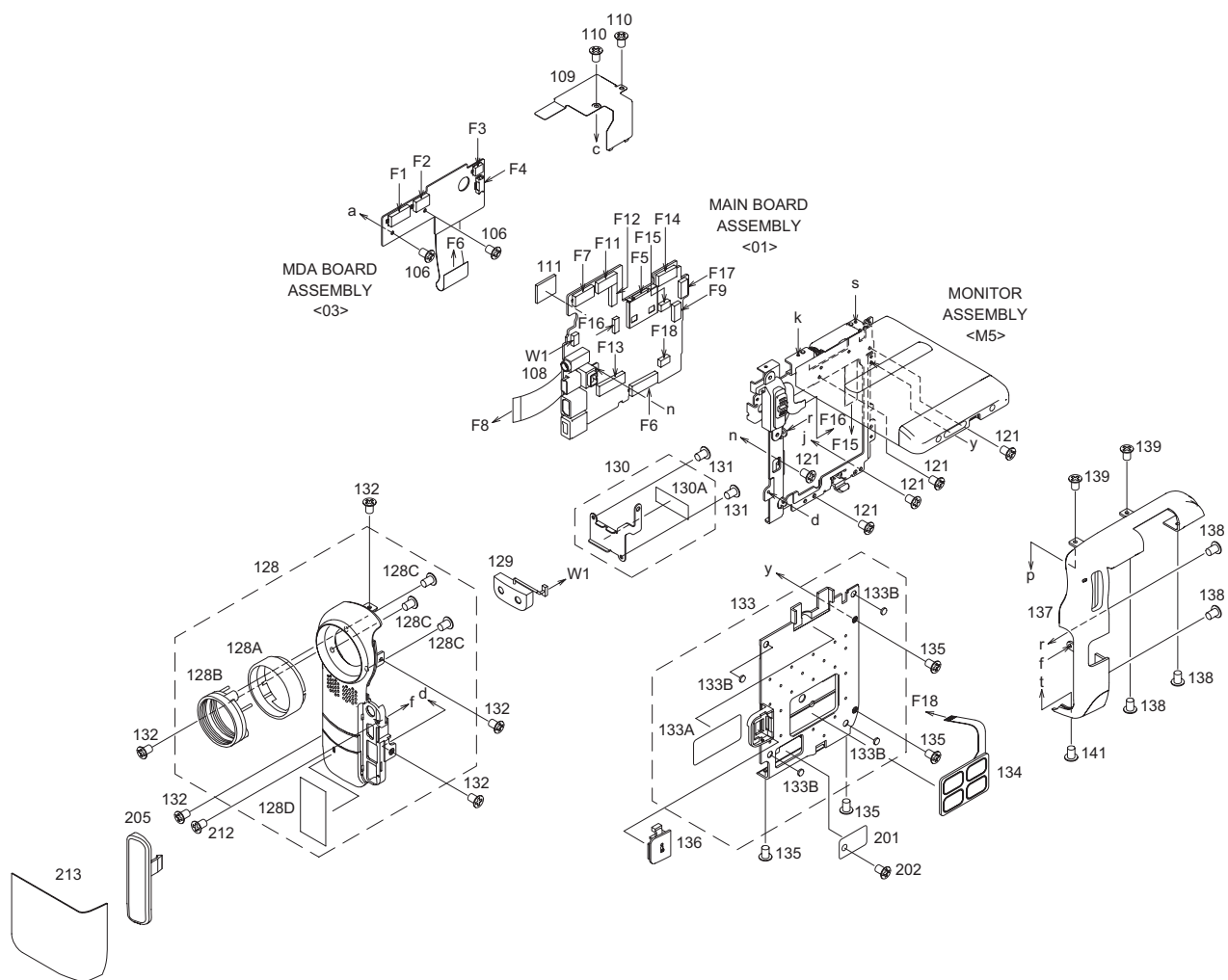
#### 1.1 PACKING AND ACCESSORY ASSEMBLY <M1>

The instruction manual to be provided with this product will differ according to the destination.



3-2(No.YF031)





900A

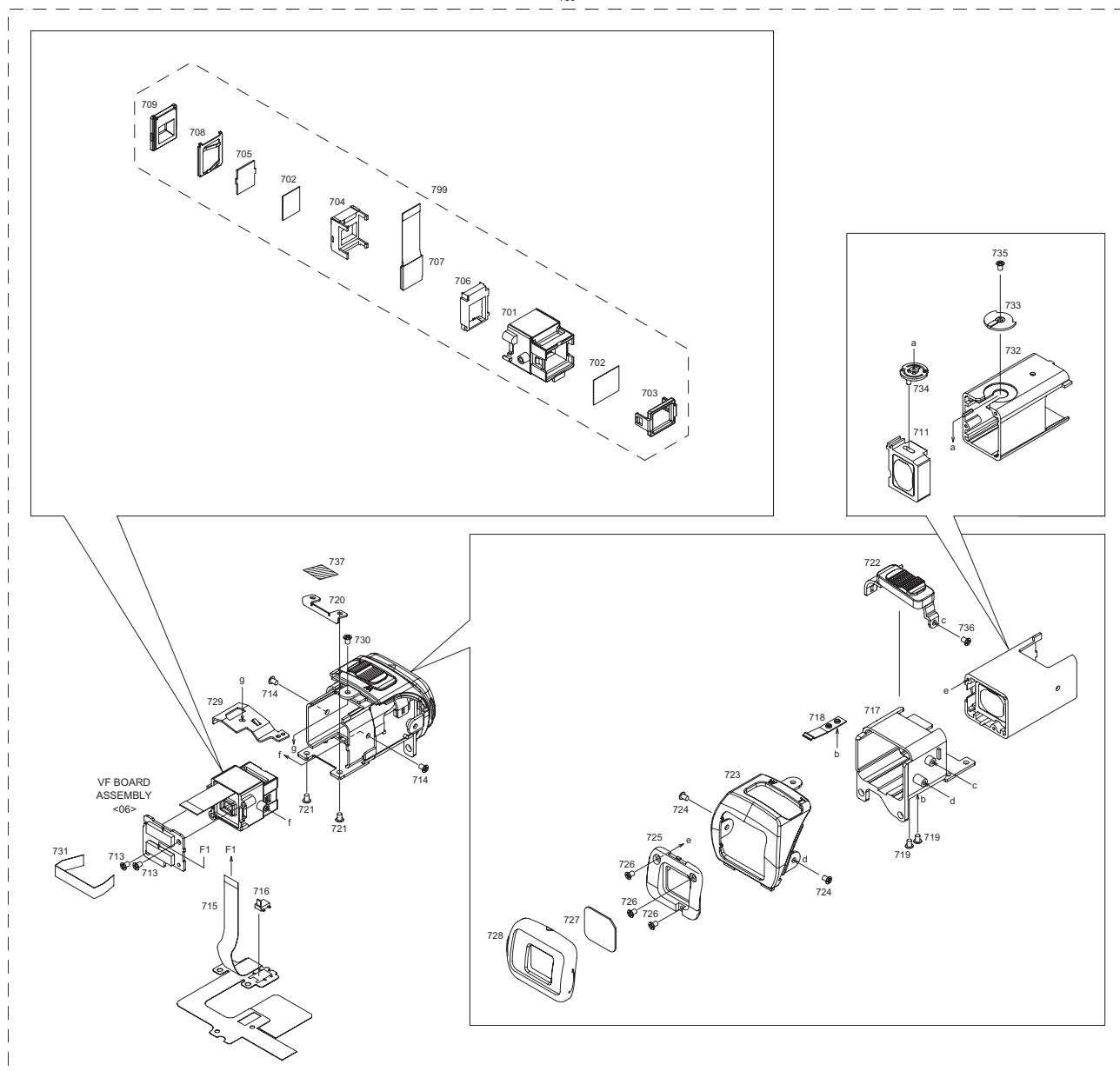
YMA0029P  
YMA0029T

| Classification  | Part No.    | Symbol in drawing |
|-----------------|-------------|-------------------|
| Grease          | KYODO-SH-JB | AA                |
| Oil             | YTU94027    | BB                |
| Grease (HANARL) | RX-410R     | CC                |

NOTE2: Mark ★ is not contained in 900A.

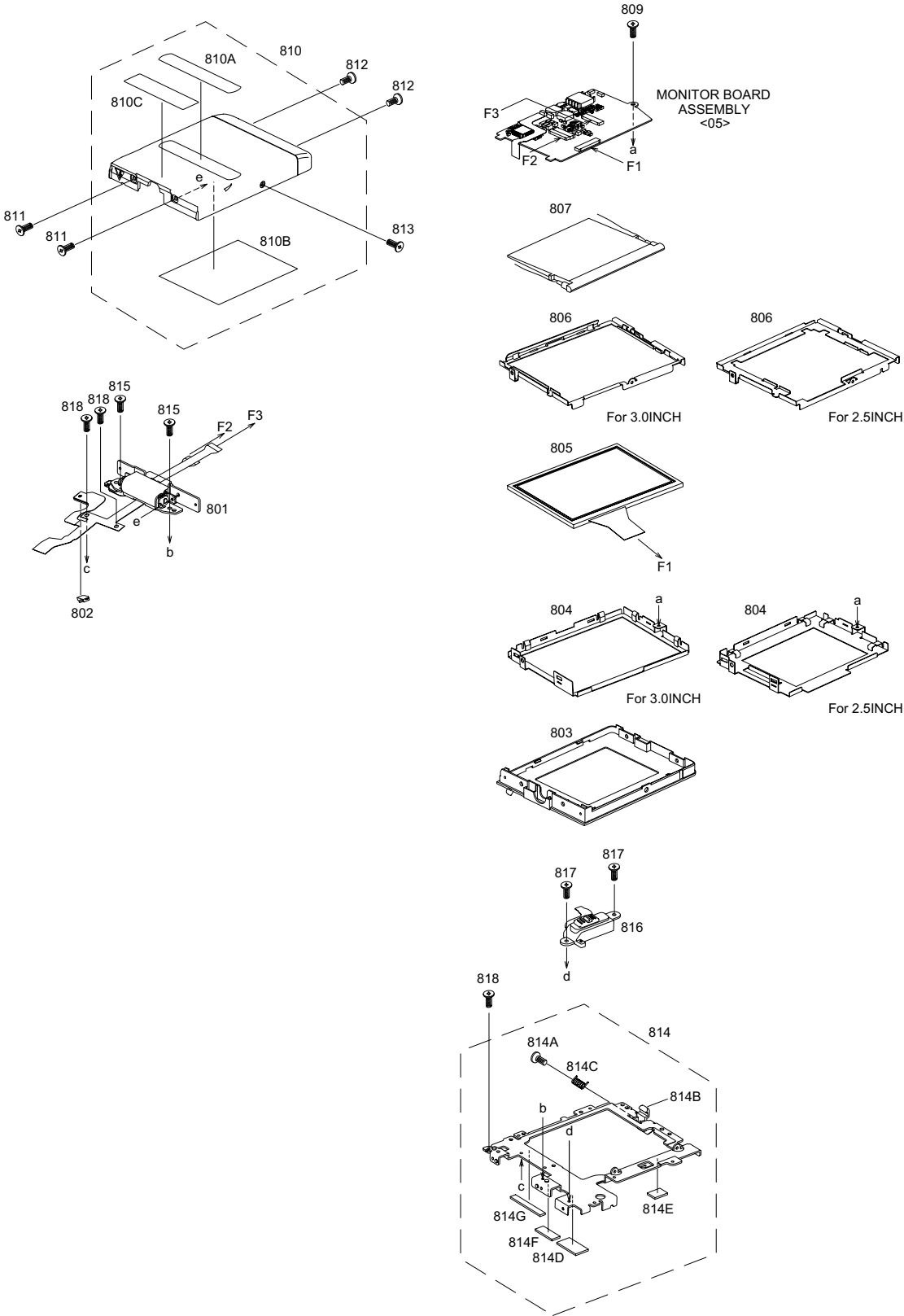
## 1.4 VF(COLOR) ASSEMBLY <M4>

700



1.5 MONITOR ASSEMBLY <M5>

800



## 2. PARTS LIST

### PACKING AND ACCESSORY ASSEMBLY <M1>

| △ Symbol No. | Part No.        | Part Name           | Description          | Local |
|--------------|-----------------|---------------------|----------------------|-------|
| 001          | LY30023-003A    | POLY BAG            |                      |       |
| 002          | LY33819-009A    | PACKING CASE        |                      |       |
| 003          | LY21227-001B    | CUSHION             |                      |       |
| 004          | QPA02503505P    | POLY BAG            | 25cm x 35cm          |       |
| 006          | QAM0541-001     | MULTI CABLE         | MULTI                |       |
| 008          | QAM0572-001     | AUDIO CABLE         | MIC                  |       |
| 009          | QQR0917-002     | CORE FILTER         | MIC 2T               |       |
| 010          | QAM0538-001     | USB CABLE           | USB                  |       |
| 011          | QQR0491-002     | FERRITE CORE        | USB 1T               |       |
| △ 012        | LY21103-009A    | AC ADAPTER          | L-ANGLE TYPE AP-V14U |       |
| △ 012        | or LY21154-003A | AC ADAPTER          | L-ANGLE TYPE AP-V15U |       |
| 016          | LY21186-002A    | REMOTE CONTROL UNIT | RM-V720U             |       |
| △ 017        | LY32203-003A    | BATTERY PACK ASSY   | BN-V107U-S           |       |
| 018          | LY33772-001D    | HOOD CAP ASSY       |                      |       |
| 051          | QPA02003506     | POLY BAG            | DOCUMENT 20cm x 35cm |       |
| 052          | LY32210-079A    | CD ROM ASSY         |                      |       |
| △ 053        | LYT1280-001A    | INST BOOK(EN)       | (ENGLISH)            |       |
| △ 053        | LYT1280-002A    | INST BOOK(FR)       | (FRENCH)             |       |
| △ 053        | LYT1280-003A    | INST BOOK(SP)       | (SPANISH)            |       |
| 054          | LYT1247-001A    | INST BOOK(SOFT.EN)  | (SOFT.ENGLISH)       |       |
| 054          | LYT1247-003A    | INST BOOK(SOFT.FR)  | (SOFT.FRENCH)        |       |
| 054          | LYT1247-005A    | INST BOOK(SOFT.SP)  | (SOFT.SPANISH)       |       |
| 057          | BT-51034-1      | REGIST CARD         |                      |       |
| 070          | BT-51005-6      | WARRANTY INF.       |                      |       |
| 071          | -----           | WARRANTY CARD       |                      |       |
| 099          | LY32210-043A    | CD ROM ASSY         |                      |       |
| 999          | LY44670-001A    | SHEET               |                      |       |

### FINAL ASSEMBLY <M2>

| △ Symbol No. | Part No.     | Part Name           | Description    | Local |
|--------------|--------------|---------------------|----------------|-------|
| 101          | LY34147-001A | BKT(MECHA)ASSY      |                |       |
| 101A         | LY42796-001A | BUSH                | (x3)           |       |
| 102          | LY30032-002A | SPECIAL SCREW       | MECHA-BKT(x3)  |       |
| 103          | LY34174-001A | BKT(PRE-REC)        |                |       |
| 104          | LY30031-015A | SPECIAL SCREW       | BKTP/R-MEC     |       |
| 106          | LY30031-015A | SPECIAL SCREW       | MDAPWB-MEC(x2) |       |
| 108          | WJT0137-001B | E-CARD WIRE         | FRONT-MAIN     |       |
| 109          | LY34061-001A | SHIELD COVER        |                |       |
| 110          | LY30031-041A | SPECIAL SCREW       | SH.P/R-M.B(x2) |       |
| 111          | LY30034-054A | SPACER(A)           | SENSOR FPC     |       |
| 112          | LY33959-001A | BRACKET(OP)ASSY     |                |       |
| 112A         | LY42796-003A | BUSH                | (x2)           |       |
| 113          | LY30032-007A | SPECIAL SCREW       | OP-OP BKT(x2)  |       |
| 114          | LY30031-016A | SPECIAL SCREW       | OP/BKT-ARM(x2) |       |
| 115          | LY30032-007A | SPECIAL SCREW       | ARM-OP         |       |
| 116          | LY30031-016A | SPECIAL SCREW       | VF-ARM(x3)     |       |
| 117          | LY30031-016A | SPECIAL SCREW       | M.BKT-ARM(x3)  |       |
| 119          | WJT0143-001A | E-CARD WIRE         | SD-MAIN        |       |
| 120          | LY30031-016A | SPECIAL SCREW       | SD PWB-ARM     |       |
| 121          | LY30031-016A | SPECIAL SCREW       | FRMUP-ARM(x5)  |       |
| 122          | LY34230-001A | BKT(TOP)ASSY        | JVM            |       |
| 122A         | LY44634-001A | SPACER              | JVM            |       |
| 123          | LY30031-016A | SPECIAL SCREW       | BKTT1-ARM(x2)  |       |
| 124          | LY30031-016A | SPECIAL SCREW       | BKTT2-ARM(x2)  |       |
| 125          | LY33785-001H | REAR COVER ASSY(SD) |                |       |
| 126          | LY33787-001C | CAMERA OPE UNIT     |                |       |
| 127          | LY30031-016A | SPECIAL SCREW       | REAR-ARM(x2)   |       |
| 128          | LY21122-001G | FRONT COVER ASSY    | JVM            |       |
| 128A         | LY33763-001A | RING                |                |       |
| 128B         | LY33764-001B | HOOD                |                |       |
| 128C         | LY30031-039A | SPECIAL SCREW       | (x3)           |       |
| 128D         | LY30034-077A | SPACER(A)           |                |       |
| 129          | LY33770-001B | MIC ASSY            |                |       |
| 130          | LY44631-001A | BKT(MIC) ASSY       | JVM            |       |
| 130A         | LY30034-058A | SPACER(A)           | JVM            |       |
| 131          | LY30031-031A | SPECIAL SCREW       | HOLDER-FRT(x2) |       |
| 132          | LY30031-016A | SPECIAL SCREW       | FRONT-ARM(x5)  |       |
| △ 133        | LY33901-001F | UPPER CASE ASSY     |                |       |
| 133A         | LY44602-001B | SHEET(CAUTION)      |                |       |
| 133B         | LY42350-001A | FOOT                | (x4)           |       |

| △ Symbol No. | Part No.      | Part Name           | Description     | Local |
|--------------|---------------|---------------------|-----------------|-------|
| 134          | LY33784-001A  | SUB OPE UNIT        |                 |       |
| 135          | LY30031-016A  | SPECIAL SCREW       | UPPR-FRMUP(x4)  |       |
| 136          | LY33905-001C  | COVER(DV)ASSY       |                 |       |
| 137          | LY33776-001F  | SIDE COVER(L)ASSY   |                 |       |
| 138          | LY30031-016A  | SPECIAL SCREW       | SCOV-L-FRM(x4)  |       |
| 139          | LY30031-016A  | SPECIAL SCREW       | SCOV-L-BKTT(x2) |       |
| 141          | LY30031-0E7A  | SPECIAL SCREW       | SCOV-L-FRMU     |       |
| 142          | LY21127-001B  | TOP COVER           |                 |       |
| 143          | LY30031-016A  | SPECIAL SCREW       | TPCOV-BKTT(x2)  |       |
| 144          | LY21124-001B  | SIDE COVER(R)       |                 |       |
| 145          | LY30031-027A  | SPECIAL SCREW       | SCOV-R-ARM      |       |
| △ 146        | LY33778-001F  | CASSETTE COVER ASSY |                 |       |
| 146A         | LY33779-001B  | KNOB(B.LOCK)        |                 |       |
| 146B         | LY33780-001B  | HOLDER(B.LOCK)      |                 |       |
| 146C         | LY44442-001A  | SPRING SHAFT        |                 |       |
| 146D         | LY42350-001A  | FOOT                | (x2)            |       |
| 146E         | LY44600-001B  | TORSION SPRING      |                 |       |
| 146F         | LY30031-002A  | SPECIAL SCREW       | HOLDER-RCA(x2)  |       |
| △ 146G       | LY34169-001A  | LABEL(C.COVER)      |                 |       |
| 147          | LY33782-001A  | HOOK(F)             |                 |       |
| 148          | LY30031-016A  | SPECIAL SCREW       | C.COV-ARM(x4)   |       |
| 149          | LY30031-016A  | SPECIAL SCREW       | HOOK-ARM(x2)    |       |
| 150          | LY30031-016A  | SPECIAL SCREW       | SCOV-R-ARMF     |       |
| 151          | LY30034-044A  | SPACER(A)           | OP FPC          |       |
| 152          | LY44619-001A  | SPACER              | CCD PWB         |       |
| 201          | LY44560-001A  | COVER(JIG CON)      |                 |       |
| 202          | LY30031-016A  | SPECIAL SCREW       | COVJIG-FRM      |       |
| 203          | LY34157-001B  | COVER(ADJ)          |                 |       |
| 204          | LY30031-016A  | SPECIAL SCREW       | COVADJ-ARM      |       |
| 205          | LY33907-001C  | JACK COVER ASSY     |                 |       |
| 206          | LY21225-001B  | GRIP BELT ASSY      |                 |       |
| 207          | LY40699-002A  | LABEL(PUSH)         |                 |       |
| 208          | LY32001-004A  | LABEL(HOUSING)      |                 |       |
| 209          | QAM0404-002   | MEMORY CARD         | MMC 8MB* DX97US |       |
| 210          | LY34218-001B  | DUMMY BATTERY       |                 |       |
| 212          | LY30031-023A  | SPECIAL SCREW       | SCOV-FRONT      |       |
| 213          | LY30034-060A  | SPACER(A)           | F-WINDOW        |       |
| 301          | J3H-101A      | OP BLOCK ASSY       |                 |       |
| 301A         | LY44455-001A  | J3H FOCUS MOTOR     |                 |       |
| 301B         | LY44456-001A  | J3H ZOOM MOTOR      |                 |       |
| 301C         | LY44457-001B  | J3H IRIS            |                 |       |
| 301D         | QYSPSGU1430ZA | TAP SCREW           | (x3)            |       |
| 301E         | LY44596-001A  | SPECIAL SCREW       | (x2)            |       |
| 301F         | LY44613-001A  | SPECIAL SCREW       |                 |       |
| 302          | LY44458-001A  | OP LPF              |                 |       |
| 303          | LY33816-001A  | LPF HOLDER          |                 |       |
| 304          | LY44461-001A  | MASK                |                 |       |
| 305          | LY44462-001B  | SHEET               |                 |       |
| 306          | LYH30547-002A | CCD BASE ASSY       |                 |       |
| 308          | LY44482-001B  | SPECIAL SCREW       | (x2)            |       |
| 309          | LY30034-043A  | SPACER(A)           | CCD FPC         |       |
| 500          | LU04D301C     | LOWER UNIT ASSY     | JAPAN           |       |
| 501          | LY33962-001D  | COVER(SPK)          |                 |       |
| 502          | QAS0196-001   | SPEAKER             |                 |       |
| 503          | LY33967-001B  | BKT(SPEAKER)        |                 |       |
| 504          | LY21190-001D  | ARM ASSY            |                 |       |
| 504A         | LY42796-003A  | BUSH                |                 |       |
| 504B         | LY34175-001A  | KNOB(LOCK)          |                 |       |
| 504C         | QYSPSGT1730ZA | TAP SCREW           | KNOB            |       |
| 504D         | LY30001-023A  | TENSION SPRING      |                 |       |
| 505          | LY30031-016A  | SPECIAL SCREW       | COV(SPK-AR)(x3) |       |
| 507          | LY30031-016A  | SPECIAL SCREW       | FRONT-ARM       |       |
| 508          | LY32575-002A  | BATTERY TERNIMAL    |                 |       |
| 509          | QAL0549-001   | FPC                 | BATT FPC        |       |
| 510          | LY30031-016A  | SPECIAL SCREW       | BATT.TE-AR(x2)  |       |
| 511          | LY30034-031A  | SPACER(A)           |                 |       |
| 512          | LY30034-056A  | SPACER(A)           |                 |       |

#### \*NOTE:

DATA FILE is not contained in MEMORY CARD of the service part.

# MECHANISM ASSEMBLY <M3>

| △ Symbol No. | Part No.      | Part Name                   | Description           | Local |
|--------------|---------------|-----------------------------|-----------------------|-------|
| 900          | YMA0029T      | MECHA(A)ASSY                | Y/E Y07442            |       |
| 900A         | YMA0029P      | MECHA(A)ASSY                | JVM/BJVC              |       |
| 901          | LY32870-001Q  | CASSETTEHOUSING ASSY        |                       |       |
| 902          | YQ43893-8     | MINI SCREW                  | (x3)                  |       |
| 903          | LYH30420-001A | UPPER BASE ASSY             |                       |       |
| 904          | QYSPSPU1425M  | SCREW                       | M1.4 x 2.5mm          |       |
| 905          | YDV2102B      | DRUM ASSY                   | M/B SET022            |       |
| 906          | LY44533-001A  | DAMPER SCREW ASSY           | JVM/BJVC(x2)          |       |
| 907          | LY44533-002A  | DAMPER SCREW ASSY           | JVM/BJVC              |       |
| 908          | LY31538-001F  | REEL DISK ASSY              |                       |       |
| 909          | LY31538-002H  | REEL DISK ASSY              |                       |       |
| 910          | YQ44246       | SLIT WASHER                 | (x2)                  |       |
| 911          | LY10372-001H  | REEL COVER ASSY             |                       |       |
| 912          | LY42120-002A  | MINI SCREW                  |                       |       |
| 913          | LY41945-003A  | MINI SCREW                  | (x2)                  |       |
| 914          | YQ44246       | SLIT WASHER                 |                       |       |
| 915          | LY43725-001F  | TENSION ARM ASSY            |                       |       |
| 916          | LYH40269-001A | SLANT POLE ARM ASSY         |                       |       |
| 917          | LY43731-001F  | TAKE UP ARM ASSY            |                       |       |
| 918          | LY31531-001E  | SWING ARM ASSY              |                       |       |
| 919          | YQ43893-9     | MINI SCREW                  |                       |       |
| 920          | LYH30424-001A | SLIDE DECK FINAL ASSY       |                       |       |
| 921          | YQ43893       | MINI SCREW                  | (x2)                  |       |
| 922          | LY43023-001A  | MINI SCREW                  |                       |       |
| 924          | LYH30419-001A | PAD ARM ASSY                |                       |       |
| 925          | YQ44246       | SLIT WASHER                 |                       |       |
| 928          | LYH40270-001A | TAKE UP BRAKE ASSY          |                       |       |
| 929          | YQ44246       | SLIT WASHER                 |                       |       |
| 930          | LY43684-001B  | TENSION CONTROL LEVER ASSY  |                       |       |
| 931          | LY32861-001B  | CENTER GEAR                 |                       |       |
| 932          | LY31516-001H  | PINCH ROLLER ARM FINAL ASSY |                       |       |
| 933          | YQ44246       | SLIT WASHER                 |                       |       |
| 934          | LY43681-001A  | TENSION CONTROL PLATE ASSY  |                       |       |
| 935          | LY43687-001A  | BRAKE CONTROL LEVER ASSY    |                       |       |
| 936          | LYH30421-001A | MOTOR BRACKET ASSY          |                       |       |
| 937          | YQ43893       | MINI SCREW                  | (x3)                  |       |
| 938          | LYH30422-001A | GUIDE RAIL ASSY             |                       |       |
| 939          | YQ43893       | MINI SCREW                  |                       |       |
| 940          | YQ44246       | SLIT WASHER                 | (x2)                  |       |
| 941          | LY32843-001F  | SLIDE LEVER2 ASSY           |                       |       |
| 942          | LY43690-001A  | LOADING PLATE ASSY          |                       |       |
| 943          | YQ44246       | SLIT WASHER                 |                       |       |
| 944          | LY32858-001B  | EJECT LEVER                 |                       |       |
| 945          | YQ44246       | SLIT WASHER                 |                       |       |
| 946          | LYH40271-001A | BASE R ASSY                 |                       |       |
| 947          | YQ43893       | MINI SCREW                  |                       |       |
| 948          | LY41945-001B  | MINI SCREW                  |                       |       |
| 949          | LY43665-001A  | MODE GEAR                   |                       |       |
| 950          | QSW0876-005   | ROTARY ENCODER              |                       |       |
| 951          | YQ43893       | MINI SCREW                  | (x2)                  |       |
| 952          | LY32860-001D  | GEAR COVER ASSY             |                       |       |
| 953          | YQ43893       | MINI SCREW                  | (x2)                  |       |
| 954          | YQ43893-4     | MINI SCREW                  |                       |       |
| 955          | LY43676-001A  | MAIN CAM ASSY               |                       |       |
| 956          | LY41941-001B  | SLIDE ARM ASSY              |                       |       |
| 957          | LY43678-001A  | CONNECT GEAR 2              |                       |       |
| 958          | LY43679-001C  | SUB CAM ASSY                |                       |       |
| 959          | LY42120-001A  | MINI SCREW                  |                       |       |
| 960          | LY43692-001A  | CONTROL ARM ASSY            |                       |       |
| 961          | LY32859-001A  | REEL GEAR 1                 |                       |       |
| 962          | LY31508-004D  | DRUM BASE ASSY              |                       |       |
| 963          | LY43675-006B  | MINI SCREW                  | (x3)                  |       |
| 964          | QAR0142-001   | CAPSTAN MOTOR               |                       |       |
| 965          | YQ43893       | MINI SCREW                  |                       |       |
| 966          | LY10367-001L  | MAIN DECK ASSY              |                       |       |
| 976          | YQ44246       | SLIT WASHER                 |                       |       |
| 978          | LY44609-001A  | WASHER                      |                       |       |
| 979          | LY44502-001A  | SPACER                      | JVM/BJVC              |       |
| 998          | QYWFM163013   | WASHER                      | 6.3mm/21.1mm x 0.01mm |       |

# VF ASSEMBLY <M4>

| △ Symbol No. | Part No.     | Part Name        | Description    | Local |
|--------------|--------------|------------------|----------------|-------|
| 700          | VU04D301D    | VF UNIT ASSY     | JAPAN          |       |
| 701          | LY21135-001E | FRAME(VF)        |                |       |
| 702          | LY44417-001A | SHEET(POLA)      | (x2)           |       |
| 703          | LY33735-001A | STOPPER(POLA)    |                |       |
| 704          | LY33738-001A | HOLDER(SHEET)    |                |       |
| 705          | LY44419-001A | SHEET(DIFF)      |                |       |
| 706          | LY33736-001B | GUIDE(LCD)       |                |       |
| 707          | QLD0313-001  | LCD MODULE       |                |       |
| 708          | LY33746-001A | SPRING(LCD)      |                |       |
| 709          | LY33739-001A | CASE(B.LIGHT)    |                |       |
| 711          | LY33799-001C | LENS HOLDER ASSY |                |       |
| 713          | LY30031-031A | SPECIAL SCREW    | VF PWB-FRM(x2) |       |
| 714          | LY30031-031A | SPECIAL SCREW    | CASEVF-FRM(x2) |       |
| 715          | QAL0550-002  | FPC              | VF FPC         |       |
| 716          | NSW0200-001X | LEVER SWITCH     | TEZUKE         |       |
| 717          | LY21137-001C | GUIDE(OUTER)     |                |       |
| 718          | LY33804-001B | PLATE(CLICK)     |                |       |
| 719          | LY30031-005A | SPECIAL SCREW    | OUTER-PLT(x2)  |       |
| 720          | LY33805-001A | BRACKET          |                |       |
| 721          | LY30031-0E1A | SPECIAL SCREW    | BKT-FPCPWB(x2) |       |
| 722          | LY33803-001C | ZOOM UNIT        |                |       |
| 723          | LY21172-001D | VF COVER         |                |       |
| 724          | LY30031-002A | SPECIAL SCREW    | COV.-OUTER(x2) |       |
| 725          | LY21171-001C | HOLDER(EYE)      |                |       |
| 726          | LY30031-046A | SPECIAL SCREW    | HOLDR-CASE(x3) |       |
| 727          | LY44548-001A | SHEET(LENS)      |                |       |
| 728          | LY21136-001D | EYE CUP          |                |       |
| 729          | LY33988-001A | BRACKET(TOP2)    |                |       |
| 730          | LY30031-0E1A | SPECIAL SCREW    | COVVF-BKT2     |       |
| 731          | LY30034-035B | SPACER(A)        | VF PWB         |       |
| 732          | LY21134-001D | COVER(VF)        |                |       |
| 733          | LY33801-001C | LEVER(1)         |                |       |
| 734          | LY33802-001B | LEVER(2)         |                |       |
| 735          | LY30031-026A | SPECIAL SCREW    |                |       |
| 736          | LY30031-002A | SPECIAL SCREW    | SW-OUTER       |       |
| 737          | LY30034-051A | SPACER(A)        | SW PWB         |       |
| 799          | LY34201-001D | FRAME ASSY       |                |       |

# MONITOR ASSEMBLY <M5>

| △ Symbol No. | Part No.     | Part Name          | Description    | Local  |
|--------------|--------------|--------------------|----------------|--------|
| △ 800        | MU04D32501E  | MONITOR UNIT ASSY  | JAPAN          | DX77US |
| △ 800        | MU04D33001E  | MONITOR UNIT ASSY  | JAPAN          | DX97US |
| 801          | LY33795-001C | HINGE UNIT ASSY    |                |        |
| 802          | NSW0217-001X | DETECT SWITCH      |                |        |
| 803          | LY21130-001D | MONITOR CASE(3)    |                | DX97US |
| 803          | LY21191-001D | MONITOR CASE(2.5)  |                | DX77US |
| 804          | LY33793-001A | LCD BKT 3 (1)      |                | DX97US |
| 804          | LY33902-001A | LCD BKT 2.5(1)     |                | DX77US |
| 805          | QLD0314-001  | LCD MODULE         |                | DX77US |
| 805          | QLD0315-001  | LCD MODULE         |                | DX97US |
| 806          | LY33794-001A | LCD BKT 3 (2)      |                | DX97US |
| 806          | LY33903-001A | LCD BKT 2.5(2)     |                | DX77US |
| 807          | QLL0157-001  | BACK LIGHT         |                | DX77US |
| 807          | QLL0158-001  | BACK LIGHT         |                | DX97US |
| 809          | LY30031-041A | SPECIAL SCREW      | MONPWB-BKT     |        |
| △ 810        | LY21131-001E | MONITOR COVER ASSY |                |        |
| 810A         | LY33790-001B | MARK               |                |        |
| 810B         | LY30034-069A | SPACER(A)          |                |        |
| 810C         | LY44620-001B | STICKER            |                |        |
| 811          | LY30031-013A | SPECIAL SCREW      | MCOV-HINGE(x2) |        |
| 812          | LY30031-0E6A | SPECIAL SCREW      | MCOV2-BKT(x2)  |        |
| 813          | LY30031-0E5A | SPECIAL SCREW      | MCOV1-FRM      |        |
| 814          | LY33977-001C | FRAME(UP)ASSY      |                |        |
| 814A         | LY30032-006A | SPECIAL SCREW      |                |        |
| 814B         | LY33975-001A | KNOB(MONI.LOCK)    |                |        |
| 814C         | LY44517-001B | TORSION SPRING     |                |        |
| 814D         | LY30034-049A | SPACER(A)          |                |        |
| 814E         | LY30034-057A | SPACER(A)          |                |        |
| 814F         | LY30034-065A | SPACER(A)          |                |        |
| 814G         | LY30034-070A | SPACER(A)          |                |        |
| 815          | LY30031-009A | SPECIAL SCREW      | HING-FRMUP(x2) |        |

| △ Symbol No. | Part No.     | Part Name      | Description    | Local |
|--------------|--------------|----------------|----------------|-------|
| 816          | LY21128-001C | POWER(OPE)UNIT |                |       |
| 817          | LY30031-016A | SPECIAL SCREW  | FRMUP-POWE(x2) |       |
| 818          | LY30031-005A | SPECIAL SCREW  | FPC-FRMUP(x3)  |       |

## MAIN BOARD ASSEMBLY <01>

| △ Symbol No. | Part No.        | Part Name       | Description | Local |
|--------------|-----------------|-----------------|-------------|-------|
| PW1          | YB10456G-03     | MAIN BOARD ASSY |             |       |
| IC1001       | MN103S33NJ      | IC(MICRO C ROM) | MASK        |       |
| IC1001 or    | MN103SF33NY4JB  | IC(MICRO C ROM) | FLASH       |       |
| IC1002       | MB90097PFV153-X | IC(MICRO C ROM) | MB90099     |       |
| IC1003       | SN74AHC1G00K-X  | IC              |             |       |
| IC1003 or    | SN74AHC1G00DC-X | IC              |             |       |
| IC1003 or    | 74HC1G00GW-X    | IC              |             |       |
| IC1003 or    | MC74HC1G00DF-X  | IC              |             |       |
| IC1004       | NJU7108F3-X     | IC              |             |       |
| IC1004 or    | TC75S56FU-X     | IC              |             |       |
| IC1005       | M95320-WDW6-X   | IC              |             |       |
| IC1006       | RS5C314-X       | IC              |             |       |
| IC1007       | IC-PST3423U-X   | IC              |             |       |
| IC1007 or    | S-80823CNNB-X   | IC              |             |       |
| IC1701       | BA10358FVM-W    | IC              | REELAMP5V   |       |
| IC1702       | NJM2407R-W      | IC              | REELSMT     |       |
| IC2101       | AK4550VT-X      | IC              |             |       |
| IC2201       | AK4564VQ        | IC              | 48P0.5      |       |
| IC3001       | JCY0152         | IC              | JCY0152     |       |
| IC3006       | JCY0177-W       | IC              |             |       |
| IC3201       | JCP8075         | IC              |             |       |
| IC3501       | JCY0132         | IC              |             |       |
| IC3502       | SN74AHC1G04K-X  | IC              |             |       |
| IC3502 or    | SN74AHC1G04DC-X | IC(DIGITAL)     |             |       |
| IC3701       | BH7612FV-X      | IC              |             |       |
| IC3731       | MM1504XN-X      | IC              |             |       |
| IC4201       | HD49340NP-X     | IC              | CDS/AD QFN  |       |
| IC4202       | MM1613AN-X      | IC              | REG 3V      |       |
| IC4301       | JCY0200         | IC              | CAMERA DSP  |       |
| IC4302       | R1160N151B-X    | IC              | REG 1.5V    |       |
| IC4701       | NJM2143R-X      | IC              |             |       |
| IC4701 or    | TA75W01FU-X     | IC              |             |       |
| IC4702       | NJM2143R-X      | IC              |             |       |
| IC4702 or    | TA75W01FU-X     | IC              |             |       |
| IC4703       | NJM2143R-X      | IC              |             |       |
| IC4703 or    | TA75W01FU-X     | IC              |             |       |
| IC4704       | NJM3414AV-X     | IC              |             |       |
| IC4901       | JCY0207         | IC              |             |       |
| IC4902       | NJM3414AV-X     | IC              |             |       |
| IC4951       | AN41902A        | IC              |             |       |
| IC5001       | JCY0185         | IC              | TG/VDR      |       |
| IC6001       | XC6202P33M-X    | IC              |             |       |
| IC6002       | R1224N102G-X    | IC              |             |       |
| IC6101       | FA3698F         | IC              | SW_REG IC   |       |
| IC8001       | TMS320DSC24GHKL | IC              | DSC24       |       |
| IC8002       | K4S643233F-SE75 | IC              | 64MSDRAM    |       |
| IC8002 or    | K4S643233F-DE75 | IC              | 64MSDRAM    |       |
| IC8003       | MR27T1602F19HLA | IC(MICRO C ROM) | OTP         |       |
| IC8004       | BU2360FV-X      | IC              | FS PLL      |       |
| IC8301       | ISP1181ABS      | IC              | USBQFN2.6   |       |
| Q1001        | DTA114EM-X      | DIGI TRANSISTOR |             |       |
| Q1002        | EMD3-W          | PAIR TRANSISTOR |             |       |
| Q1003        | EMD3-W          | PAIR TRANSISTOR |             |       |
| Q1004        | EMD3-W          | PAIR TRANSISTOR |             |       |
| Q1005        | DTC143XM-X      | DIGI TRANSISTOR |             |       |
| Q1007        | 2SC5658/QRS/-X  | TRANSISTOR      |             |       |
| Q1008        | DTC124EM-X      | DIGI TRANSISTOR |             |       |
| Q1009        | 2SJ347-X        | MOS FET         |             |       |
| Q1010        | DTC144EM-X      | DIGI TRANSISTOR |             |       |
| Q1011        | DTC143EM-X      | DIGI TRANSISTOR |             |       |
| Q1012        | EMD3-W          | PAIR TRANSISTOR |             |       |
| Q2201        | DTC144EE-X      | DIGI TRANSISTOR |             |       |
| Q2201 or     | UN9213J-X       | DIGI TRANSISTOR |             |       |
| Q2401        | 2SC5658/QRS/-X  | TRANSISTOR      |             |       |
| Q2403        | 2SC5658/QRS/-X  | TRANSISTOR      |             |       |
| Q2801        | EMX1-W          | TRANSISTOR      |             |       |

| △ Symbol No. | Part No.       | Part Name       | Description  | Local |
|--------------|----------------|-----------------|--------------|-------|
| Q3001        | 2SC5658/QRS/-X | TRANSISTOR      |              |       |
| Q3003        | 2SC5658/QRS/-X | TRANSISTOR      |              |       |
| Q3701        | EMT1-W         | PAIR TRANSISTOR |              |       |
| Q3702        | EMZ1-W         | PAIR TRANSISTOR |              |       |
| Q3704        | 2SA2029/QRS/-X | TRANSISTOR      |              |       |
| Q3705        | EMT1-W         | PAIR TRANSISTOR |              |       |
| Q3706        | DTC114EE-X     | DIGI TRANSISTOR |              |       |
| Q3706 or     | UN9211J-X      | DIGI TRANSISTOR |              |       |
| Q3707        | DTC114EE-X     | DIGI TRANSISTOR |              |       |
| Q3707 or     | UN9211J-X      | DIGI TRANSISTOR |              |       |
| Q3731        | 2SC5658/QRS/-X | TRANSISTOR      |              |       |
| Q3733        | EMZ1-W         | PAIR TRANSISTOR |              |       |
| Q3734        | 2SC5658/QRS/-X | TRANSISTOR      |              |       |
| Q3735        | EMZ1-W         | PAIR TRANSISTOR |              |       |
| Q4701        | 2SC4655J/BC/-X | TRANSISTOR      |              |       |
| Q4951        | DTC114EM-X     | DIGI TRANSISTOR |              |       |
| Q6001        | QS6U24-W       | MOS FET         |              |       |
| Q6201        | QS6U24-W       | MOS FET         |              |       |
| Q6202        | 2SA1577/RS/-X  | TRANSISTOR      |              |       |
| Q6203        | QS6U24-W       | MOS FET         |              |       |
| Q6204        | QS6U24-W       | MOS FET         |              |       |
| Q6205        | 2SA1577/RS/-X  | TRANSISTOR      |              |       |
| Q6206        | DTC124TM-X     | DIGI TRANSISTOR |              |       |
| Q6207        | QS6U24-W       | MOS FET         |              |       |
| Q6208        | QS6U24-W       | MOS FET         |              |       |
| Q6209        | SSM3J14T-X     | MOS FET         |              |       |
| Q6210        | 2SC5658/QRS/-X | TRANSISTOR      |              |       |
| Q6211        | 2SC5658/QRS/-X | TRANSISTOR      |              |       |
| Q6212        | EMZ1-W         | PAIR TRANSISTOR |              |       |
| Q6213        | SSM3J14T-X     | MOS FET         |              |       |
| Q6214        | 2SK3019-X      | MOS FET         |              |       |
| Q6701        | SSM3J14T-X     | MOS FET         |              |       |
| Q8001        | 2SA1774/RS/-X  | TRANSISTOR      | 2SA1774      |       |
| Q8001 or     | 2SB1462J/RS/-X | TRANSISTOR      |              |       |
| D1001        | DA221-X        | DIODE ARRAY     |              |       |
| D1001 or     | MA133-X        | SI DIODE        |              |       |
| D3001        | EC2C01C-TR-X   | VARI CAP DIODE  |              |       |
| D3002        | EC2C01C-TR-X   | VARI CAP DIODE  |              |       |
| D3003        | EC2C01C-TR-X   | VARI CAP DIODE  |              |       |
| D3004        | RB551V-30-X    | SB DIODE        |              |       |
| D4901        | RB751V-40-X    | SB DIODE        |              |       |
| D5001        | 1SS355-X       | SI DIODE        |              |       |
| D5001 or     | MA111-X        | SI DIODE        |              |       |
| △ D6001      | RB706D-40-X    | SB DIODE        |              |       |
| △ D6002      | RB715F-X       | SB DIODE        |              |       |
| D6201        | RB480Y-W       | SB DIODE        |              |       |
| D6202        | EDZ4.7B-X      | Z DIODE         |              |       |
| D6203        | RB480Y-W       | SB DIODE        |              |       |
| D6701        | DG1M3-X        | SB DIODE        |              |       |
| D6702        | DG1M3-X        | SB DIODE        |              |       |
| C1001        | NDCA1HJ-8R0W   | C CAPACITOR     | 8pF 50V J    |       |
| C1002        | NDCA1HJ-100W   | C CAPACITOR     | 10pF 50V J   |       |
| C1003        | NCFA1AZ-104W   | C CAPACITOR     | 0.1uF 10V Z  |       |
| C1004        | NCFA1AZ-104W   | C CAPACITOR     | 0.1uF 10V Z  |       |
| C1005        | NCFA1AZ-104W   | C CAPACITOR     | 0.1uF 10V Z  |       |
| C1007        | NCFA1AZ-104W   | C CAPACITOR     | 0.1uF 10V Z  |       |
| C1008        | NCFA1AZ-104W   | C CAPACITOR     | 0.1uF 10V Z  |       |
| C1009        | NCFA1AZ-104W   | C CAPACITOR     | 0.1uF 10V Z  |       |
| C1010        | NCFA1AZ-104W   | C CAPACITOR     | 0.1uF 10V Z  |       |
| C1011        | NCFA1AZ-104W   | C CAPACITOR     | 0.1uF 10V Z  |       |
| C1012        | NCFA1AZ-104W   | C CAPACITOR     | 0.1uF 10V Z  |       |
| C1013        | NCFA1AZ-104W   | C CAPACITOR     | 0.1uF 10V Z  |       |
| C1014        | NCFA1AZ-104W   | C CAPACITOR     | 0.1uF 10V Z  |       |
| C1015        | NCFA1AZ-104W   | C CAPACITOR     | 0.1uF 10V Z  |       |
| C1019        | NCFA1HZ-103W   | C CAPACITOR     | 0.01uF 50V Z |       |
| C1020        | NCBA1EK-682W   | C CAPACITOR     | 6800pF 25V K |       |
| C1021        | NCBA1EK-682W   | C CAPACITOR     | 6800pF 25V K |       |
| C1022        | NCFA1HZ-103W   | C CAPACITOR     | 0.01uF 50V Z |       |
| C1024        | NCFA1HZ-103W   | C CAPACITOR     | 0.01uF 50V Z |       |
| C1025        | NCFA1HZ-103W   | C CAPACITOR     | 0.01uF 50V Z |       |
| C1029        | NCFA1HZ-103W   | C CAPACITOR     | 0.01uF 50V Z |       |
| C1030        | NBZ0015-106X   | TA E CAPACITOR  | 10uF 6.3V M  |       |
| C1032        | NCFA1HZ-103W   | C CAPACITOR     | 0.01uF 50V Z |       |
| C1035        | NCFA1HZ-103W   | C CAPACITOR     | 0.01uF 50V Z |       |
| C1036        | NCFA1AZ-104W   | C CAPACITOR     | 0.1uF 10V Z  |       |
| C1037        | NCFA1HZ-103W   | C CAPACITOR     | 0.01uF 50V Z |       |

| △ Symbol No. | Part No.       | Part Name      | Description   | Local | △ Symbol No. | Part No.       | Part Name      | Description   | Local |
|--------------|----------------|----------------|---------------|-------|--------------|----------------|----------------|---------------|-------|
| C1038        | NCFA1HZ-103W   | C CAPACITOR    | 0.01uF 50V Z  |       | C3007        | NBE20GM-476X   | TA E CAPACITOR | 47uF 4V M     |       |
| C1039        | NCFA1HZ-103W   | C CAPACITOR    | 0.01uF 50V Z  |       | C3008        | NBZ0015-106X   | TA E CAPACITOR | 10uF 6.3V M   |       |
| C1040        | NDCA1HJ-100W   | C CAPACITOR    | 10pF 50V J    |       | C3009        | NCB30JK-105X   | C CAPACITOR    | 1uF 6.3V K    |       |
| C1041        | NCFA1AZ-104W   | C CAPACITOR    | 0.1uF 10V Z   |       | C3011        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       |
| C1042        | NCFA1AZ-104W   | C CAPACITOR    | 0.1uF 10V Z   |       | C3012        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       |
| C1043        | NCFA1AZ-104W   | C CAPACITOR    | 0.1uF 10V Z   |       | C3013        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       |
| C1044        | NDCA1HJ-470W   | C CAPACITOR    | 47pF 50V J    |       | C3015        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       |
| C1045        | NDCA1HJ-470W   | C CAPACITOR    | 47pF 50V J    |       | C3016        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       |
| C1046        | NCF31AZ-105X   | C CAPACITOR    | 1uF 10V Z     |       | C3017        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       |
| C1047        | NCFA1HZ-103W   | C CAPACITOR    | 0.01uF 50V Z  |       | C3020        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       |
| C1048        | NCFA1HZ-103W   | C CAPACITOR    | 0.01uF 50V Z  |       | C3021        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       |
| C1049        | NCFA1HZ-103W   | C CAPACITOR    | 0.01uF 50V Z  |       | C3022        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       |
| C1050        | NCFA1HZ-103W   | C CAPACITOR    | 0.01uF 50V Z  |       | C3023        | NDCA1HJ-330W   | C CAPACITOR    | 33pF 50V J    |       |
| C1051        | NCB31CK-223X   | C CAPACITOR    | 0.022uF 16V K |       | C3024        | NCBA1HK-102W   | C CAPACITOR    | 1000pF 50V K  |       |
| C1052        | NCB31CK-223X   | C CAPACITOR    | 0.022uF 16V K |       | C3025        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       |
| C1053        | NCB31CK-223X   | C CAPACITOR    | 0.022uF 16V K |       | C3026        | NCJA0JK-105W-A | C CAPACITOR    | 1uF 6.3V K    |       |
| C1054        | NCB31CK-223X   | C CAPACITOR    | 0.022uF 16V K |       | C3027        | NCBA1EK-472W   | C CAPACITOR    | 4700pF 25V K  |       |
| C1055        | NCFA1AZ-104W   | C CAPACITOR    | 0.1uF 10V Z   |       | C3028        | NDCA1EJ-271W   | C CAPACITOR    | 270pF 25V J   |       |
| C1064        | NBE20JM-226X   | TA E CAPACITOR | 22uF 6.3V M   |       | C3029        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       |
| C1701        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | C3030        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       |
| C1702        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | C3031        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       |
| C1703        | NBE20JM-106X   | TA E CAPACITOR | 10uF 6.3V M   |       | C3032        | NCBA1HK-102W   | C CAPACITOR    | 1000pF 50V K  |       |
| C2101        | NCJA0JK-105W-A | C CAPACITOR    | 1uF 6.3V K    |       | C3033        | NDCA1HJ-150W   | C CAPACITOR    | 15pF 50V J    |       |
| C2102        | NCJA0JK-105W-A | C CAPACITOR    | 1uF 6.3V K    |       | C3036        | NDCA1HJ-8R0W   | C CAPACITOR    | 8pF 50V J     |       |
| C2103        | NCBA1HK-222W   | C CAPACITOR    | 2200pF 50V K  |       | C3037        | NDCA1HJ-8R0W   | C CAPACITOR    | 8pF 50V J     |       |
| C2104        | NCBA1HK-222W   | C CAPACITOR    | 2200pF 50V K  |       | C3038        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       |
| C2105        | NBZ0015-106X   | TA E CAPACITOR | 10uF 6.3V M   |       | C3039        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       |
| C2106        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | C3042        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       |
| C2107        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | C3043        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       |
| C2108        | NBE90JM-475X   | TA E CAPACITOR | 4.7uF 6.3V M  |       | C3044        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       |
| C2201        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | C3045        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       |
| C2202        | NCJA0JK-105W-A | C CAPACITOR    | 1uF 6.3V K    |       | C3046        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       |
| C2203        | NCJA0JK-105W-A | C CAPACITOR    | 1uF 6.3V K    |       | C3047        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       |
| C2204        | NCJA0JK-105W-A | C CAPACITOR    | 1uF 6.3V K    |       | C3048        | NCBA1CK-473W   | C CAPACITOR    | 0.047uF 16V K |       |
| C2205        | NCJA0JK-105W-A | C CAPACITOR    | 1uF 6.3V K    |       | C3049        | NCBA1HK-222W   | C CAPACITOR    | 2200pF 50V K  |       |
| C2209        | NCJA0JK-105W-A | C CAPACITOR    | 1uF 6.3V K    |       | C3050        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       |
| C2210        | NCJA0JK-105W-A | C CAPACITOR    | 1uF 6.3V K    |       | C3055        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       |
| C2211        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | C3064        | NCBA1HK-102W   | C CAPACITOR    | 1000pF 50V K  |       |
| C2212        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | C3077        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       |
| C2213        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | C3078        | NCB30JK-105X   | C CAPACITOR    | 1uF 6.3V K    |       |
| C2214        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | C3079        | NBZ0015-106X   | TA E CAPACITOR | 10uF 6.3V M   |       |
| C2215        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | C3080        | NCBA1HK-102W   | C CAPACITOR    | 1000pF 50V K  |       |
| C2216        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | C3201        | NBZ0015-106X   | TA E CAPACITOR | 10uF 6.3V M   |       |
| C2217        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | C3202        | NCB21AK-105X   | C CAPACITOR    | 1uF 10V K     |       |
| C2218        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | C3203        | NCB21AK-105X   | C CAPACITOR    | 1uF 10V K     |       |
| C2223        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | C3204        | NBZ0015-106X   | TA E CAPACITOR | 10uF 6.3V M   |       |
| C2224        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | C3205        | NBE20GM-476X   | TA E CAPACITOR | 47uF 4V M     |       |
| C2225        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | C3206        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       |
| C2226        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | C3207        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       |
| C2401        | NBZ0015-106X   | TA E CAPACITOR | 10uF 6.3V M   |       | C3208        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       |
| C2402        | NBZ0015-106X   | TA E CAPACITOR | 10uF 6.3V M   |       | C3209        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       |
| C2403        | NBZ0015-106X   | TA E CAPACITOR | 10uF 6.3V M   |       | C3210        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       |
| C2404        | NBZ0015-106X   | TA E CAPACITOR | 10uF 6.3V M   |       | C3211        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       |
| C2405        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | C3212        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       |
| C2406        | NBZ0015-106X   | TA E CAPACITOR | 10uF 6.3V M   |       | C3213        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       |
| C2603        | NCBA1CK-223W   | C CAPACITOR    | 0.022uF 16V K |       | C3214        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       |
| C2604        | NCBA1CK-223W   | C CAPACITOR    | 0.022uF 16V K |       | C3215        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       |
| C2605        | NCBA1EK-472W   | C CAPACITOR    | 4700pF 25V K  |       | C3216        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       |
| C2606        | NCBA1EK-472W   | C CAPACITOR    | 4700pF 25V K  |       | C3217        | NCB30JK-105X   | C CAPACITOR    | 1uF 6.3V K    |       |
| C2609        | NCBA1HK-102W   | C CAPACITOR    | 1000pF 50V K  |       | C3218        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       |
| C2610        | NCBA1HK-102W   | C CAPACITOR    | 1000pF 50V K  |       | C3219        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       |
| C2611        | NCJA0JK-105W-A | C CAPACITOR    | 1uF 6.3V K    |       | C3220        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       |
| C2612        | NCJA0JK-105W-A | C CAPACITOR    | 1uF 6.3V K    |       | C3221        | NCB30JK-105X   | C CAPACITOR    | 1uF 6.3V K    |       |
| C2613        | NCJA0JK-105W-A | C CAPACITOR    | 1uF 6.3V K    |       | C3222        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       |
| C2614        | NDCA1HJ-101W   | C CAPACITOR    | 100pF 50V J   |       | C3223        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       |
| C2615        | NDCA1HJ-101W   | C CAPACITOR    | 100pF 50V J   |       | C3224        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       |
| C2616        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       | C3225        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       |
| C2617        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       | C3226        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       |
| C2651        | NCBA1HK-102W   | C CAPACITOR    | 1000pF 50V K  |       | C3227        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       |
| C2652        | NCBA1HK-102W   | C CAPACITOR    | 1000pF 50V K  |       | C3228        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       |
| C2655        | NCBA1CK-473W   | C CAPACITOR    | 0.047uF 16V K |       | C3229        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       |
| C2656        | NCBA1CK-473W   | C CAPACITOR    | 0.047uF 16V K |       | C3230        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       |
| C2801        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       | C3231        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       |
| C2802        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       | C3232        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       |
| C3001        | NBZ0015-106X   | TA E CAPACITOR | 10uF 6.3V M   |       | C3233        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       |
| C3003        | NCB30JK-105X   | C CAPACITOR    | 1uF 6.3V K    |       | C3234        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       |
| C3005        | NBZ0015-106X   | TA E CAPACITOR | 10uF 6.3V M   |       | C3235        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       |
| C3006        | NCB30JK-105X   | C CAPACITOR    | 1uF 6.3V K    |       | C3236        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       |

| △ Symbol No. | Part No.       | Part Name      | Description   | Local | △ Symbol No. | Part No.       | Part Name      | Description  | Local |
|--------------|----------------|----------------|---------------|-------|--------------|----------------|----------------|--------------|-------|
| C3237        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       | C4304        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K  |       |
| C3240        | NDCA1HJ-101W   | C CAPACITOR    | 100pF 50V J   |       | C4305        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K  |       |
| C3501        | NBZ0015-106X   | TA E CAPACITOR | 10uF 6.3V M   |       | C4306        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K  |       |
| C3502        | NBZ0015-106X   | TA E CAPACITOR | 10uF 6.3V M   |       | C4307        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K  |       |
| C3503        | NBZ0015-106X   | TA E CAPACITOR | 10uF 6.3V M   |       | C4308        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K  |       |
| C3504        | NCBA1AK-473W   | C CAPACITOR    | 0.047uF 10V K |       | C4309        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K  |       |
| C3505        | NCBA1CK-223W   | C CAPACITOR    | 0.022uF 16V K |       | C4310        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K  |       |
| C3506        | NCJA0JK-105W-A | C CAPACITOR    | 1uF 6.3V K    |       | C4311        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K  |       |
| C3507        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       | C4312        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K  |       |
| C3508        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       | C4313        | NBZ0015-106X   | TA E CAPACITOR | 10uF 6.3V M  |       |
| C3509        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       | C4314        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K  |       |
| C3510        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | C4315        | NBZ0015-106X   | TA E CAPACITOR | 10uF 6.3V M  |       |
| C3511        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       | C4316        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K |       |
| C3512        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | C4317        | NBZ0015-106X   | TA E CAPACITOR | 10uF 6.3V M  |       |
| C3513        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | C4701        | NBZ0015-106X   | TA E CAPACITOR | 10uF 6.3V M  |       |
| C3514        | NCBA1AK-473W   | C CAPACITOR    | 0.047uF 10V K |       | C4702        | NCFA1AZ-104W   | C CAPACITOR    | 0.1uF 10V Z  |       |
| C3515        | NCBA1AK-473W   | C CAPACITOR    | 0.047uF 10V K |       | C4703        | NCFA1AZ-104W   | C CAPACITOR    | 0.1uF 10V Z  |       |
| C3516        | NCBA1AK-473W   | C CAPACITOR    | 0.047uF 10V K |       | C4704        | NCFA1AZ-104W   | C CAPACITOR    | 0.1uF 10V Z  |       |
| C3517        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       | C4705        | NCB30JK-105X   | C CAPACITOR    | 1uF 6.3V K   |       |
| C3518        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       | C4707        | NCFA1AZ-104W   | C CAPACITOR    | 0.1uF 10V Z  |       |
| C3519        | NCBA1HK-102W   | C CAPACITOR    | 1000pF 50V K  |       | C4708        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K |       |
| C3520        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       | C4709        | NCFA1AZ-104W   | C CAPACITOR    | 0.1uF 10V Z  |       |
| C3521        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | C4710        | NCFA1AZ-104W   | C CAPACITOR    | 0.1uF 10V Z  |       |
| C3522        | NCB20JM-475X   | C CAPACITOR    | 4.7uF 6.3V M  |       | C4711        | NCFA1AZ-104W   | C CAPACITOR    | 0.1uF 10V Z  |       |
| C3523        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       | C4901        | NCFA1AZ-104W   | C CAPACITOR    | 0.1uF 10V Z  |       |
| C3524        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       | C4902        | NBZ0015-106X   | TA E CAPACITOR | 10uF 6.3V M  |       |
| C3525        | NCB20JM-475X   | C CAPACITOR    | 4.7uF 6.3V M  |       | C4903        | NCFA1AZ-104W   | C CAPACITOR    | 0.1uF 10V Z  |       |
| C3526        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       | C4904        | NBZ0015-106X   | TA E CAPACITOR | 10uF 6.3V M  |       |
| C3527        | NDCA1EJ-221W   | C CAPACITOR    | 220pF 25V J   |       | C4905        | NCFA1AZ-104W   | C CAPACITOR    | 0.1uF 10V Z  |       |
| C3528        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       | C4906        | NCFA1AZ-104W   | C CAPACITOR    | 0.1uF 10V Z  |       |
| C3701        | NBZ0015-106X   | TA E CAPACITOR | 10uF 6.3V M   |       | C4907        | NCFA1AZ-104W   | C CAPACITOR    | 0.1uF 10V Z  |       |
| C3706        | NCJA0JK-105W-A | C CAPACITOR    | 1uF 6.3V K    |       | C4908        | NCFA1AZ-104W   | C CAPACITOR    | 0.1uF 10V Z  |       |
| C3707        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       | C4909        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K |       |
| C3708        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | C4911        | NDCA1HJ-680W   | C CAPACITOR    | 68pF 50V J   |       |
| C3709        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       | C4912        | NCFA1AZ-104W   | C CAPACITOR    | 0.1uF 10V Z  |       |
| C3710        | NBE90GM-226X   | TA E CAPACITOR | 22uF 4V M     |       | C4914        | NDCA1HJ-680W   | C CAPACITOR    | 68pF 50V J   |       |
| C3711        | NBE90GM-226X   | TA E CAPACITOR | 22uF 4V M     |       | C4915        | NDCA1HJ-121W   | C CAPACITOR    | 120pF 50V J  |       |
| C3712        | NBE20GM-107X   | TA E CAPACITOR | 100uF 4V M    |       | C4916        | NCFA1AZ-104W   | C CAPACITOR    | 0.1uF 10V Z  |       |
| C3713        | NBE20GM-107X   | TA E CAPACITOR | 100uF 4V M    |       | C4917        | NCFA1AZ-104W   | C CAPACITOR    | 0.1uF 10V Z  |       |
| C3715        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       | C4951        | NCFA1AZ-104W   | C CAPACITOR    | 0.1uF 10V Z  |       |
| C3731        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       | C4952        | NBZ0015-106X   | TA E CAPACITOR | 10uF 6.3V M  |       |
| C3732        | NCBA1HK-102W   | C CAPACITOR    | 1000pF 50V K  |       | C4953        | NCFA1AZ-104W   | C CAPACITOR    | 0.1uF 10V Z  |       |
| C3733        | NDCA1HJ-3R0W   | C CAPACITOR    | 3pF 50V J     |       | C4954        | NBZ0015-106X   | TA E CAPACITOR | 10uF 6.3V M  |       |
| C3734        | NDCA1HJ-5R0W   | C CAPACITOR    | 5pF 50V J     |       | C4955        | NCFA1AZ-104W   | C CAPACITOR    | 0.1uF 10V Z  |       |
| C3735        | NDCA1HJ-330W   | C CAPACITOR    | 33pF 50V J    |       | C4956        | NBZ0015-106X   | TA E CAPACITOR | 10uF 6.3V M  |       |
| C3736        | NCBA1HK-102W   | C CAPACITOR    | 1000pF 50V K  |       | C4957        | NDCA1HJ-220W   | C CAPACITOR    | 22pF 50V J   |       |
| C3738        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       | C4958        | NDCA1HJ-220W   | C CAPACITOR    | 22pF 50V J   |       |
| C3739        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       | C5001        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K  |       |
| C3740        | NCJA0JK-105W-A | C CAPACITOR    | 1uF 6.3V K    |       | C5002        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K  |       |
| C3741        | NCJA0JK-105W-A | C CAPACITOR    | 1uF 6.3V K    |       | C5003        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K  |       |
| C3742        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | C5004        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K  |       |
| C3743        | NDCA1HJ-3R0W   | C CAPACITOR    | 3pF 50V J     |       | C5005        | NBE20JM-226X   | TA E CAPACITOR | 22uF 6.3V M  |       |
| C3744        | NDCA1HJ-5R0W   | C CAPACITOR    | 5pF 50V J     |       | C5006        | NBE20GM-476X   | TA E CAPACITOR | 47uF 4V M    |       |
| C3745        | NDCA1HJ-330W   | C CAPACITOR    | 33pF 50V J    |       | C5007        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K  |       |
| C3746        | NCB20JM-475X   | C CAPACITOR    | 4.7uF 6.3V M  |       | C5008        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K  |       |
| C3747        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       | C5009        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K  |       |
| C4201        | NBE20GM-476X   | TA E CAPACITOR | 47uF 4V M     |       | C5010        | NBP21VM-105X   | TA E CAPACITOR | 1uF 35V M    |       |
| C4202        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | C5011        | NBZ0003-475X   | TA E CAPACITOR | 4.7uF 20V M  |       |
| C4203        | NCB30JK-105X   | C CAPACITOR    | 1uF 6.3V K    |       | C5012        | NBE21AM-106X   | TA E CAPACITOR | 10uF 10V M   |       |
| C4204        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | C5013        | NCB21EK-104X   | C CAPACITOR    | 0.1uF 10V K  |       |
| C4205        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | C5014        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K  |       |
| C4206        | NCB21CK-105X   | C CAPACITOR    | 1uF 16V K     |       | C5015        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K  |       |
| C4207        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | C5016        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K  |       |
| C4208        | NCB30JK-105X   | C CAPACITOR    | 1uF 6.3V K    |       | C5017        | NCB21EK-104X   | C CAPACITOR    | 0.1uF 25V K  |       |
| C4209        | NCBA1CK-223W   | C CAPACITOR    | 0.022uF 16V K |       | C5018        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K  |       |
| C4210        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | C5019        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K  |       |
| C4211        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | C5023        | NBZ0015-106X   | TA E CAPACITOR | 10uF 6.3V M  |       |
| C4212        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | C5024        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K  |       |
| C4213        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | C6001        | NCB31CK-104X   | C CAPACITOR    | 0.1uF 16V K  |       |
| C4214        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | C6002        | NCJA0JK-105W-A | C CAPACITOR    | 1uF 6.3V K   |       |
| C4215        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | C6004        | NCB21CK-105X   | C CAPACITOR    | 1uF 16V K    |       |
| C4216        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | C6005        | NCB10JK-106X   | C CAPACITOR    | 10uF 6.3V K  |       |
| C4217        | NCB30JK-105X   | C CAPACITOR    | 1uF 6.3V K    |       | C6006        | NCB21CK-105X   | C CAPACITOR    | 1uF 16V K    |       |
| C4218        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | C6101        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K  |       |
| C4219        | NBE20GM-476X   | TA E CAPACITOR | 47uF 4V M     |       | C6103        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K  |       |
| C4301        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | C6105        | NCB21CK-105X   | C CAPACITOR    | 1uF 16V K    |       |
| C4302        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | C6106        | NBP41DM-106X   | TA E CAPACITOR | 10uF 20V M   |       |
| C4303        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | C6107        | NCB21CK-105X   | C CAPACITOR    | 1uF 16V K    |       |

| △ Symbol No. | Part No.       | Part Name      | Description   | Local | △ Symbol No. | Part No.     | Part Name      | Description   | Local |
|--------------|----------------|----------------|---------------|-------|--------------|--------------|----------------|---------------|-------|
| C6108        | NCB21CK-105X   | C CAPACITOR    | 1uF 16V K     |       | C8027        | NCBA1AK-104W | C CAPACITOR    | 0.1uF 10V K   |       |
| C6109        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | C8301        | NBZ0015-106X | TA E CAPACITOR | 10uF 6.3V M   |       |
| C6110        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | C8305        | NCBA1AK-104W | C CAPACITOR    | 0.1uF 10V K   |       |
| C6111        | NCJA0JK-105W-A | C CAPACITOR    | 1uF 6.3V K    |       | C8306        | NCBA1AK-104W | C CAPACITOR    | 0.1uF 10V K   |       |
| C6112        | NCJA0JK-105W-A | C CAPACITOR    | 1uF 6.3V K    |       | C8307        | NCBA1AK-104W | C CAPACITOR    | 0.1uF 10V K   |       |
| C6113        | NCJA0JK-105W-A | C CAPACITOR    | 1uF 6.3V K    |       | C8310        | NCBA1AK-104W | C CAPACITOR    | 0.1uF 10V K   |       |
| C6114        | NCJA0JK-105W-A | C CAPACITOR    | 1uF 6.3V K    |       | C8311        | NCBA1AK-104W | C CAPACITOR    | 0.1uF 10V K   |       |
| C6115        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | R1001        | NRSA6AJ-105W | MG RESISTOR    | 1MΩ 1/16W J   |       |
| C6116        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | R1002        | NRSA6AJ-104W | MG RESISTOR    | 100kΩ 1/16W J |       |
| C6117        | NCBA1AK-333W   | C CAPACITOR    | 0.033uF 10V K |       | R1003        | NRSA6AJ-104W | MG RESISTOR    | 100kΩ 1/16W J |       |
| C6118        | NCBA1HK-561W   | C CAPACITOR    | 560pF 50V K   |       | R1006        | NRSA6AJ-102W | MG RESISTOR    | 1kΩ 1/16W J   |       |
| C6119        | NCBA1HK-272W   | C CAPACITOR    | 2700pF 50V K  |       | R1007        | NRSA6AJ-103W | MG RESISTOR    | 10kΩ 1/16W J  |       |
| C6120        | NCBA1HK-561W   | C CAPACITOR    | 560pF 50V K   |       | R1008        | NRSA6AJ-103W | MG RESISTOR    | 10kΩ 1/16W J  |       |
| C6121        | NCBA1CK-223W   | C CAPACITOR    | 0.022uF 16V K |       | R1009        | NRSA6AJ-103W | MG RESISTOR    | 10kΩ 1/16W J  |       |
| C6122        | NCBA1HK-471W   | C CAPACITOR    | 470pF 50V K   |       | R1010        | NRSA6AJ-102W | MG RESISTOR    | 1kΩ 1/16W J   |       |
| C6123        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | R1011        | NRSA6AJ-332W | MG RESISTOR    | 3.3kΩ 1/16W J |       |
| C6124        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | R1012        | NRSA6AJ-102W | MG RESISTOR    | 1kΩ 1/16W J   |       |
| C6125        | NDCA1HJ-101W   | C CAPACITOR    | 100pF 50V J   |       | R1013        | NRSA6AJ-102W | MG RESISTOR    | 1kΩ 1/16W J   |       |
| C6126        | NCBA1AK-473W   | C CAPACITOR    | 0.047uF 10V K |       | R1014        | NRSA6AJ-102W | MG RESISTOR    | 1kΩ 1/16W J   |       |
| C6127        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | R1015        | NRSA6AJ-102W | MG RESISTOR    | 1kΩ 1/16W J   |       |
| C6128        | NCBA1AK-473W   | C CAPACITOR    | 0.047uF 10V K |       | R1016        | NRSA6AJ-103W | MG RESISTOR    | 10kΩ 1/16W J  |       |
| C6129        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       | R1017        | NRSA6AJ-474W | MG RESISTOR    | 470kΩ 1/16W J |       |
| C6130        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       | R1018        | NRSA6AJ-474W | MG RESISTOR    | 470kΩ 1/16W J |       |
| C6131        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       | R1019        | NRSA6AJ-0R0W | MG RESISTOR    | 0Ω 1/16W J    |       |
| C6132        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       | R1020        | NRSA6AJ-104W | MG RESISTOR    | 100kΩ 1/16W J |       |
| C6133        | NCBA1HK-102W   | C CAPACITOR    | 1000pF 50V K  |       | R1021        | NRSA6AJ-332W | MG RESISTOR    | 3.3kΩ 1/16W J |       |
| C6134        | NCB21CK-105X   | C CAPACITOR    | 1uF 16V K     |       | R1022        | NRSA6AJ-102W | MG RESISTOR    | 1kΩ 1/16W J   |       |
| C6201        | NCB21CK-105X   | C CAPACITOR    | 1uF 16V K     |       | R1023        | NRSA6AJ-102W | MG RESISTOR    | 1kΩ 1/16W J   |       |
| C6202        | NCB21CK-105X   | C CAPACITOR    | 1uF 16V K     |       | R1027        | NRSA6AJ-332W | MG RESISTOR    | 3.3kΩ 1/16W J |       |
| C6203        | NCBA1HK-102W   | C CAPACITOR    | 1000pF 50V K  |       | R1030        | NRSA6AJ-753W | MG RESISTOR    | 75kΩ 1/16W J  |       |
| C6205        | NCJA0JK-105W-A | C CAPACITOR    | 1uF 6.3V K    |       | R1031        | NRSA6AJ-334W | MG RESISTOR    | 330kΩ 1/16W J |       |
| C6206        | NCB21CK-105X   | C CAPACITOR    | 1uF 16V K     |       | R1032        | NRSA6AJ-332W | MG RESISTOR    | 3.3kΩ 1/16W J |       |
| C6207        | NCB10JK-106X   | C CAPACITOR    | 10uF 6.3V K   |       | R1033        | NRSA6AJ-332W | MG RESISTOR    | 3.3kΩ 1/16W J |       |
| C6208        | NCBA1EK-472W   | C CAPACITOR    | 4700pF 25V K  |       | R1034        | NRSA6AJ-332W | MG RESISTOR    | 3.3kΩ 1/16W J |       |
| C6209        | NCB21CK-105X   | C CAPACITOR    | 1uF 16V K     |       | R1035        | NRSA6AJ-102W | MG RESISTOR    | 1kΩ 1/16W J   |       |
| C6210        | NCB10JK-106X   | C CAPACITOR    | 10uF 6.3V K   |       | R1037        | NRSA6AJ-561W | MG RESISTOR    | 560Ω 1/16W J  |       |
| C6211        | NCBA1HK-102W   | C CAPACITOR    | 1000pF 50V K  |       | R1039        | NRSA6AJ-152W | MG RESISTOR    | 1.5kΩ 1/16W J |       |
| C6212        | NCB21CK-105X   | C CAPACITOR    | 1uF 16V K     |       | R1041        | NRSA6AJ-682W | MG RESISTOR    | 6.8kΩ 1/16W J |       |
| C6213        | NCB30JK-105X   | C CAPACITOR    | 1uF 6.3V K    |       | R1042        | NRSA6AJ-223W | MG RESISTOR    | 22kΩ 1/16W J  |       |
| C6214        | NCBA1AK-683W   | C CAPACITOR    | 0.068uF 10V K |       | R1043        | NRSA6AJ-104W | MG RESISTOR    | 100kΩ 1/16W J |       |
| C6215        | NCB21CK-105X   | C CAPACITOR    | 1uF 16V K     |       | R1044        | NRSA6AJ-104W | MG RESISTOR    | 100kΩ 1/16W J |       |
| C6216        | NCB30JK-105X   | C CAPACITOR    | 1uF 6.3V K    |       | R1045        | NRSA6AJ-105W | MG RESISTOR    | 1MΩ 1/16W J   |       |
| C6217        | NCJA0JK-105W-A | C CAPACITOR    | 1uF 6.3V K    |       | R1046        | NRSA6AJ-104W | MG RESISTOR    | 100kΩ 1/16W J |       |
| C6218        | NCB21CK-105X   | C CAPACITOR    | 1uF 16V K     |       | R1047        | NRSA6AJ-104W | MG RESISTOR    | 100kΩ 1/16W J |       |
| C6219        | NCB21CK-105X   | C CAPACITOR    | 1uF 16V K     |       | R1048        | NRSA6AJ-103W | MG RESISTOR    | 10kΩ 1/16W J  |       |
| C6220        | NCB21CK-105X   | C CAPACITOR    | 1uF 16V K     |       | R1049        | NRSA6AJ-623W | MG RESISTOR    | 62kΩ 1/16W J  |       |
| C6222        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | R1050        | NRSA6AJ-823W | MG RESISTOR    | 82kΩ 1/16W J  |       |
| C6224        | NCB21CK-105X   | C CAPACITOR    | 1uF 16V K     |       | R1051        | NRSA6AJ-473W | MG RESISTOR    | 47kΩ 1/16W J  |       |
| C6225        | NCB21CK-105X   | C CAPACITOR    | 1uF 16V K     |       | R1052        | NRSA6AJ-104W | MG RESISTOR    | 100kΩ 1/16W J |       |
| C6226        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | R1053        | NRSA6AJ-222W | MG RESISTOR    | 2.2kΩ 1/16W J |       |
| C6227        | NCB21CK-105X   | C CAPACITOR    | 1uF 16V K     |       | R1054        | NRSA6AJ-104W | MG RESISTOR    | 100kΩ 1/16W J |       |
| C6228        | NCB21CK-105X   | C CAPACITOR    | 1uF 16V K     |       | R1055        | NRSA6AJ-334W | MG RESISTOR    | 330kΩ 1/16W J |       |
| C6701        | NCB21CK-105X   | C CAPACITOR    | 1uF 16V K     |       | R1056        | NRSA6AJ-334W | MG RESISTOR    | 330kΩ 1/16W J |       |
| C6702        | NCB21CK-105X   | C CAPACITOR    | 1uF 16V K     |       | R1057        | NRSA6AJ-102W | MG RESISTOR    | 1kΩ 1/16W J   |       |
| C8001        | NBZ0015-106X   | TA E CAPACITOR | 10uF 6.3V M   |       | R1058        | NRSA6AJ-102W | MG RESISTOR    | 1kΩ 1/16W J   |       |
| C8002        | NBZ0015-106X   | TA E CAPACITOR | 10uF 6.3V M   |       | R1059        | NRSA6AJ-102W | MG RESISTOR    | 1kΩ 1/16W J   |       |
| C8003        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | R1060        | NRSA6AJ-103W | MG RESISTOR    | 10kΩ 1/16W J  |       |
| C8004        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | R1061        | NRSA6AJ-561W | MG RESISTOR    | 560Ω 1/16W J  |       |
| C8005        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | R1062        | NRSA6AJ-224W | MG RESISTOR    | 220kΩ 1/16W J |       |
| C8006        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | R1065        | NRSA6AJ-153W | MG RESISTOR    | 15kΩ 1/16W J  |       |
| C8007        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | R1067        | NRSA6AJ-334W | MG RESISTOR    | 330kΩ 1/16W J |       |
| C8008        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | R1068        | NRSA6AJ-102W | MG RESISTOR    | 1kΩ 1/16W J   |       |
| C8009        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | R1069        | NRSA6AJ-104W | MG RESISTOR    | 100kΩ 1/16W J |       |
| C8010        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | R1070        | NRSA6AJ-154W | MG RESISTOR    | 150kΩ 1/16W J |       |
| C8011        | NBZ0015-106X   | TA E CAPACITOR | 10uF 6.3V M   |       | R1071        | NRSA6AJ-272W | MG RESISTOR    | 2.7kΩ 1/16W J |       |
| C8012        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | R1072        | NRSA6AJ-183W | MG RESISTOR    | 18kΩ 1/16W J  |       |
| C8013        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | R1073        | NRSA6AJ-103W | MG RESISTOR    | 10kΩ 1/16W J  |       |
| C8014        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | R1074        | NRSA6AJ-472W | MG RESISTOR    | 4.7kΩ 1/16W J |       |
| C8015        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | R1075        | NRSA6AJ-473W | MG RESISTOR    | 47kΩ 1/16W J  |       |
| C8016        | NCB30JK-105X   | C CAPACITOR    | 1uF 6.3V K    |       | R1076        | NRSA6AJ-473W | MG RESISTOR    | 47kΩ 1/16W J  |       |
| C8017        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       | R1077        | NRSA6AJ-104W | MG RESISTOR    | 100kΩ 1/16W J |       |
| C8018        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | R1078        | NRSA6AJ-393W | MG RESISTOR    | 39kΩ 1/16W J  |       |
| C8021        | NCBA1CK-103W   | C CAPACITOR    | 0.01uF 16V K  |       | R1079        | NRSA6AJ-223W | MG RESISTOR    | 22kΩ 1/16W J  |       |
| C8022        | NBZ0015-106X   | TA E CAPACITOR | 10uF 6.3V M   |       | R1080        | NRSA6AJ-822W | MG RESISTOR    | 8.2kΩ 1/16W J |       |
| C8023        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | R1081        | NRSA6AJ-103W | MG RESISTOR    | 10kΩ 1/16W J  |       |
| C8024        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       | R1082        | NRSA6AJ-123W | MG RESISTOR    | 12kΩ 1/16W J  |       |
| C8025        | NBE20JM-106X   | TA E CAPACITOR | 10uF 6.3V M   |       | R1083        | NRSA6AJ-102W | MG RESISTOR    | 1kΩ 1/16W J   |       |
| C8026        | NCBA1AK-104W   | C CAPACITOR    | 0.1uF 10V K   |       |              |              |                |               |       |

| △ Symbol No. | Part No.     | Part Name   | Description   | Local | △ Symbol No. | Part No.     | Part Name    | Description   | Local |
|--------------|--------------|-------------|---------------|-------|--------------|--------------|--------------|---------------|-------|
| R1084        | NRSA6AJ-102W | MG RESISTOR | 1kΩ 1/16W J   |       | R3015        | NRSA6AJ-392W | MG RESISTOR  | 3.9kΩ 1/16W J |       |
| R1085        | NRSA6AJ-102W | MG RESISTOR | 1kΩ 1/16W J   |       | R3016        | NRVA6AD-560W | CMF RESISTOR | 56Ω 1/16W D   |       |
| R1086        | NRSA6AJ-332W | MG RESISTOR | 3.3kΩ 1/16W J |       | R3017        | NRVA6AD-560W | CMF RESISTOR | 56Ω 1/16W D   |       |
| R1087        | NRSA6AJ-332W | MG RESISTOR | 3.3kΩ 1/16W J |       | R3018        | NRVA6AD-560W | CMF RESISTOR | 56Ω 1/16W D   |       |
| R1088        | NRSA6AJ-332W | MG RESISTOR | 3.3kΩ 1/16W J |       | R3019        | NRVA6AD-560W | CMF RESISTOR | 56Ω 1/16W D   |       |
| R1089        | NRSA6AJ-332W | MG RESISTOR | 3.3kΩ 1/16W J |       | R3020        | NRVA6AD-512W | CMF RESISTOR | 5.1kΩ 1/16W D |       |
| R1090        | NRSA6AJ-682W | MG RESISTOR | 6.8kΩ 1/16W J |       | R3021        | NRSA6AJ-0R0W | MG RESISTOR  | 0Ω 1/16W J    |       |
| R1091        | NRSA6AJ-103W | MG RESISTOR | 10kΩ 1/16W J  |       | R3025        | NRSA6AJ-102W | MG RESISTOR  | 1kΩ 1/16W J   |       |
| R1092        | NRSA6AJ-103W | MG RESISTOR | 10kΩ 1/16W J  |       | R3027        | NRSA6AJ-103W | MG RESISTOR  | 10kΩ 1/16W J  |       |
| R1093        | NRSA6AJ-103W | MG RESISTOR | 10kΩ 1/16W J  |       | R3029        | NRSA6AJ-822W | MG RESISTOR  | 8.2kΩ 1/16W J |       |
| R1094        | NRSA6AJ-103W | MG RESISTOR | 10kΩ 1/16W J  |       | R3030        | NRSA6AJ-224W | MG RESISTOR  | 220kΩ 1/16W J |       |
| R1095        | NRSA6AJ-102W | MG RESISTOR | 1kΩ 1/16W J   |       | R3031        | NRSA6AJ-224W | MG RESISTOR  | 220kΩ 1/16W J |       |
| R1097        | NRSA6AJ-104W | MG RESISTOR | 100kΩ 1/16W J |       | R3032        | NRSA6AJ-105W | MG RESISTOR  | 1MΩ 1/16W J   |       |
| R1098        | NRSA6AJ-223W | MG RESISTOR | 22kΩ 1/16W J  |       | R3034        | NRSA6AJ-222W | MG RESISTOR  | 2.2kΩ 1/16W J |       |
| R1701        | NRSA6AJ-823W | MG RESISTOR | 82kΩ 1/16W J  |       | R3036        | NRSA6AJ-103W | MG RESISTOR  | 10kΩ 1/16W J  |       |
| R1702        | NRSA6AJ-222W | MG RESISTOR | 2.2kΩ 1/16W J |       | R3037        | NRSA6AJ-681W | MG RESISTOR  | 680Ω 1/16W J  |       |
| R1703        | NRSA6AJ-222W | MG RESISTOR | 2.2kΩ 1/16W J |       | R3038        | NRSA6AJ-103W | MG RESISTOR  | 10kΩ 1/16W J  |       |
| R1704        | NRSA6AJ-222W | MG RESISTOR | 2.2kΩ 1/16W J |       | R3042        | NRSA6AJ-823W | MG RESISTOR  | 82kΩ 1/16W J  |       |
| R1705        | NRSA6AJ-222W | MG RESISTOR | 2.2kΩ 1/16W J |       | R3043        | NRSA6AJ-123W | MG RESISTOR  | 12kΩ 1/16W J  |       |
| R1706        | NRSA6AJ-823W | MG RESISTOR | 82kΩ 1/16W J  |       | R3044        | NRSA6AJ-0R0W | MG RESISTOR  | 0Ω 1/16W J    |       |
| R1707        | NRSA6AJ-103W | MG RESISTOR | 10kΩ 1/16W J  |       | R3046        | NRSA6AJ-181W | MG RESISTOR  | 180Ω 1/16W J  |       |
| R1708        | NRSA6AJ-124W | MG RESISTOR | 120kΩ 1/16W J |       | R3047        | NRSA6AJ-472W | MG RESISTOR  | 4.7kΩ 1/16W J |       |
| R1709        | NRSA6AJ-103W | MG RESISTOR | 10kΩ 1/16W J  |       | R3049        | NRSA6AJ-561W | MG RESISTOR  | 560Ω 1/16W J  |       |
| R1710        | NRSA6AJ-124W | MG RESISTOR | 120kΩ 1/16W J |       | R3050        | NRSA6AJ-561W | MG RESISTOR  | 560Ω 1/16W J  |       |
| R1711        | NRSA6AJ-102W | MG RESISTOR | 1kΩ 1/16W J   |       | R3053        | NRSA6AJ-0R0W | MG RESISTOR  | 0Ω 1/16W J    |       |
| R1712        | NRSA6AJ-102W | MG RESISTOR | 1kΩ 1/16W J   |       | R3057        | NRSA6AJ-151W | MG RESISTOR  | 150Ω 1/16W J  |       |
| R1713        | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J    |       | R3071        | NRSA6AJ-0R0W | MG RESISTOR  | 0Ω 1/16W J    |       |
| R2101        | NRSA6AJ-471W | MG RESISTOR | 470Ω 1/16W J  |       | R3077        | NRSA6AJ-0R0W | MG RESISTOR  | 0Ω 1/16W J    |       |
| R2102        | NRSA6AJ-471W | MG RESISTOR | 470Ω 1/16W J  |       | R3201        | NRSA6AJ-101W | MG RESISTOR  | 100Ω 1/16W J  |       |
| R2103        | NRSA6AJ-0R0W | MG RESISTOR | 0Ω 1/16W J    |       | R3202        | NRSA6AD-183W | MG RESISTOR  | 18kΩ 1/16W D  |       |
| R2201        | NRSA6AJ-224W | MG RESISTOR | 220kΩ 1/16W J |       | R3203        | NRSA6AD-123W | MG RESISTOR  | 12kΩ 1/16W D  |       |
| R2202        | NRSA6AJ-564W | MG RESISTOR | 560kΩ 1/16W J |       | R3204        | NRSA6AD-821W | MG RESISTOR  | 820Ω 1/16W D  |       |
| R2203        | NRSA6AJ-393W | MG RESISTOR | 39kΩ 1/16W J  |       | R3205        | NRSA6AD-821W | MG RESISTOR  | 820Ω 1/16W D  |       |
| R2204        | NRSA6AJ-154W | MG RESISTOR | 150kΩ 1/16W J |       | R3207        | NRSA6AJ-0R0W | MG RESISTOR  | 0Ω 1/16W J    |       |
| R2206        | NRSA6AJ-333W | MG RESISTOR | 33kΩ 1/16W J  |       | R3212        | NRSA6AJ-151W | MG RESISTOR  | 150Ω 1/16W J  |       |
| R2207        | NRSA6AJ-333W | MG RESISTOR | 33kΩ 1/16W J  |       | R3213        | NRSA6AJ-101W | MG RESISTOR  | 100Ω 1/16W J  |       |
| R2208        | NRSA6AJ-223W | MG RESISTOR | 22kΩ 1/16W J  |       | R3214        | NRSA6AJ-101W | MG RESISTOR  | 100Ω 1/16W J  |       |
| R2209        | NRSA6AJ-223W | MG RESISTOR | 22kΩ 1/16W J  |       | R3339        | NRSA6AJ-0R0W | MG RESISTOR  | 0Ω 1/16W J    |       |
| R2212        | NRSA6AJ-2R7W | MG RESISTOR | 2.7Ω 1/16W J  |       | R3501        | NRSA6AJ-471W | MG RESISTOR  | 470Ω 1/16W J  |       |
| R2213        | NRSA6AJ-2R7W | MG RESISTOR | 2.7Ω 1/16W J  |       | R3502        | NRSA6AJ-104W | MG RESISTOR  | 100kΩ 1/16W J |       |
| R2217        | NRSA6AJ-100W | MG RESISTOR | 10Ω 1/16W J   |       | R3503        | NRSA6AJ-102W | MG RESISTOR  | 1kΩ 1/16W J   |       |
| R2225        | NRSA6AJ-0R0W | MG RESISTOR | 0Ω 1/16W J    |       | R3504        | NRSA6AD-241W | MG RESISTOR  | 240Ω 1/16W D  |       |
| R2226        | NRSA6AJ-0R0W | MG RESISTOR | 0Ω 1/16W J    |       | R3505        | NRSA6AD-241W | MG RESISTOR  | 240Ω 1/16W D  |       |
| R2227        | NRSA6AJ-822W | MG RESISTOR | 8.2kΩ 1/16W J |       | R3506        | NRSA6AD-241W | MG RESISTOR  | 240Ω 1/16W D  |       |
| R2228        | NRSA6AJ-822W | MG RESISTOR | 8.2kΩ 1/16W J |       | R3507        | NRSA6AD-241W | MG RESISTOR  | 240Ω 1/16W D  |       |
| R2229        | NRSA6AJ-333W | MG RESISTOR | 33kΩ 1/16W J  |       | R3508        | NRSA6AJ-223W | MG RESISTOR  | 22kΩ 1/16W J  |       |
| R2230        | NRSA6AJ-333W | MG RESISTOR | 33kΩ 1/16W J  |       | R3511        | NRSA6AJ-101W | MG RESISTOR  | 100Ω 1/16W J  |       |
| R2231        | NRSA6AJ-102W | MG RESISTOR | 1kΩ 1/16W J   |       | R3521        | NRSA6AJ-0R0W | MG RESISTOR  | 0Ω 1/16W J    |       |
| R2401        | NRSA6AJ-472W | MG RESISTOR | 4.7kΩ 1/16W J |       | R3522        | NRSA6AJ-0R0W | MG RESISTOR  | 0Ω 1/16W J    |       |
| R2402        | NRSA6AJ-472W | MG RESISTOR | 4.7kΩ 1/16W J |       | R3523        | NRSA6AJ-0R0W | MG RESISTOR  | 0Ω 1/16W J    |       |
| R2407        | NRSA6AJ-100W | MG RESISTOR | 10Ω 1/16W J   |       | R3524        | NRSA6AJ-0R0W | MG RESISTOR  | 0Ω 1/16W J    |       |
| R2601        | NRSA6AJ-222W | MG RESISTOR | 2.2kΩ 1/16W J |       | R3525        | NRSA6AJ-0R0W | MG RESISTOR  | 0Ω 1/16W J    |       |
| R2602        | NRSA6AJ-222W | MG RESISTOR | 2.2kΩ 1/16W J |       | R3526        | NRSA6AJ-0R0W | MG RESISTOR  | 0Ω 1/16W J    |       |
| R2603        | NRSA6AJ-0R0W | MG RESISTOR | 0Ω 1/16W J    |       | R3527        | NRSA6AJ-0R0W | MG RESISTOR  | 0Ω 1/16W J    |       |
| R2607        | NRSA6AJ-223W | MG RESISTOR | 22kΩ 1/16W J  |       | R3701        | NRSA6AD-271W | MG RESISTOR  | 270Ω 1/16W D  |       |
| R2608        | NRSA6AJ-223W | MG RESISTOR | 22kΩ 1/16W J  |       | R3703        | NRSA6AJ-332W | MG RESISTOR  | 3.3kΩ 1/16W J |       |
| R2609        | NRSA6AJ-224W | MG RESISTOR | 220kΩ 1/16W J |       | R3704        | NRSA6AD-301W | MG RESISTOR  | 300Ω 1/16W D  |       |
| R2610        | NRSA6AJ-224W | MG RESISTOR | 220kΩ 1/16W J |       | R3706        | NRSA6AJ-332W | MG RESISTOR  | 3.3kΩ 1/16W J |       |
| R2801        | NRSA6AJ-821W | MG RESISTOR | 820Ω 1/16W J  |       | R3707        | NRSA6AD-680W | MG RESISTOR  | 68Ω 1/16W D   |       |
| R2802        | NRSA6AJ-821W | MG RESISTOR | 820Ω 1/16W J  |       | R3708        | NRSA6AD-680W | MG RESISTOR  | 68Ω 1/16W D   |       |
| R2803        | NRSA6AJ-564W | MG RESISTOR | 560kΩ 1/16W J |       | R3709        | NRSA6AD-680W | MG RESISTOR  | 68Ω 1/16W D   |       |
| R2804        | NRSA6AJ-564W | MG RESISTOR | 560kΩ 1/16W J |       | R3710        | NRSA6AJ-103W | MG RESISTOR  | 10kΩ 1/16W J  |       |
| R2805        | NRSA6AJ-332W | MG RESISTOR | 3.3kΩ 1/16W J |       | R3711        | NRSA6AJ-103W | MG RESISTOR  | 10kΩ 1/16W J  |       |
| R2806        | NRSA6AJ-0R0W | MG RESISTOR | 0Ω 1/16W J    |       | R3712        | NRSA6AJ-105W | MG RESISTOR  | 1MΩ 1/16W J   |       |
| R2807        | NRSA6AJ-0R0W | MG RESISTOR | 0Ω 1/16W J    |       | R3713        | NRSA6AJ-104W | MG RESISTOR  | 100kΩ 1/16W J |       |
| R2808        | NRSA6AJ-0R0W | MG RESISTOR | 0Ω 1/16W J    |       | R3714        | NRSA6AJ-823W | MG RESISTOR  | 82kΩ 1/16W J  |       |
| R2809        | NRSA6AJ-0R0W | MG RESISTOR | 0Ω 1/16W J    |       | R3715        | NRSA6AJ-103W | MG RESISTOR  | 10kΩ 1/16W J  |       |
| R3002        | NRSA6AJ-103W | MG RESISTOR | 10kΩ 1/16W J  |       | R3716        | NRSA6AJ-0R0W | MG RESISTOR  | 0Ω 1/16W J    |       |
| R3004        | NRSA6AJ-103W | MG RESISTOR | 10kΩ 1/16W J  |       | R3718        | NRSA6AJ-0R0W | MG RESISTOR  | 0Ω 1/16W J    |       |
| R3005        | NRSA6AJ-100W | MG RESISTOR | 10Ω 1/16W J   |       | R3722        | NRSA6AD-750W | MG RESISTOR  | 75Ω 1/16W D   |       |
| R3006        | NRSA6AJ-100W | MG RESISTOR | 10Ω 1/16W J   |       | R3724        | NRSA6AJ-472W | MG RESISTOR  | 4.7kΩ 1/16W J |       |
| R3007        | NRSA6AJ-562W | MG RESISTOR | 5.6kΩ 1/16W J |       | R3725        | NRSA6AD-750W | MG RESISTOR  | 75Ω 1/16W D   |       |
| R3008        | NRSA6AJ-222W | MG RESISTOR | 2.2kΩ 1/16W J |       | R3726        | NRSA6AJ-472W | MG RESISTOR  | 4.7kΩ 1/16W J |       |
| R3009        | NRSA6AJ-103W | MG RESISTOR | 10kΩ 1/16W J  |       | R3727        | NRSA6AJ-472W | MG RESISTOR  | 4.7kΩ 1/16W J |       |
| R3010        | NRSA6AJ-103W | MG RESISTOR | 10kΩ 1/16W J  |       | R3728        | NRSA6AD-750W | MG RESISTOR  | 75Ω 1/16W D   |       |
| R3011        | NRSA6AJ-224W | MG RESISTOR | 220kΩ 1/16W J |       | R3730        | NRSA6AJ-472W | MG RESISTOR  | 4.7kΩ 1/16W J |       |
| R3013        | NRSA6AJ-242W | MG RESISTOR | 2.4kΩ 1/16W J |       | R3731        | NRSA6AJ-472W | MG RESISTOR  | 4.7kΩ 1/16W J |       |
| R3014        | NRSA6AJ-392W | MG RESISTOR | 3.9kΩ 1/16W J |       | R3732        | NRSA6AJ-101W | MG RESISTOR  | 100Ω 1/16W J  |       |

| △ Symbol No. | Part No.     | Part Name   | Description   | Local | △ Symbol No. | Part No.     | Part Name   | Description   | Local |
|--------------|--------------|-------------|---------------|-------|--------------|--------------|-------------|---------------|-------|
| R3733        | NRSA6AD-561W | MG RESISTOR | 560Ω 1/16W D  |       | R4910        | NRSA6AJ-101W | MG RESISTOR | 100Ω 1/16W J  |       |
| R3734        | NRSA6AJ-822W | MG RESISTOR | 8.2kΩ 1/16W J |       | R4911        | NRSA6AJ-101W | MG RESISTOR | 100Ω 1/16W J  |       |
| R3735        | NRSA6AD-182W | MG RESISTOR | 1.8kΩ 1/16W D |       | R4912        | NRSA6AJ-101W | MG RESISTOR | 100Ω 1/16W J  |       |
| R3736        | NRSA6AJ-183W | MG RESISTOR | 18kΩ 1/16W J  |       | R4914        | NRSA6AJ-104W | MG RESISTOR | 100kΩ 1/16W J |       |
| R3737        | NRSA6AJ-183W | MG RESISTOR | 18kΩ 1/16W J  |       | R4917        | NRSA6AJ-103W | MG RESISTOR | 10kΩ 1/16W J  |       |
| R3738        | NRSA6AJ-681W | MG RESISTOR | 680Ω 1/16W J  |       | R4918        | NRSA6AJ-103W | MG RESISTOR | 10kΩ 1/16W J  |       |
| R3739        | NRSA6AJ-821W | MG RESISTOR | 820Ω 1/16W J  |       | R4921        | NRSA6AJ-0R0W | MG RESISTOR | 0Ω 1/16W J    |       |
| R3740        | NRSA6AJ-821W | MG RESISTOR | 820Ω 1/16W J  |       | R4922        | NRSA6AJ-103W | MG RESISTOR | 10kΩ 1/16W J  |       |
| R3741        | NRSA6AJ-102W | MG RESISTOR | 1kΩ 1/16W J   |       | R4923        | NRSA6AJ-123W | MG RESISTOR | 12kΩ 1/16W J  |       |
| R3742        | NRSA6AJ-104W | MG RESISTOR | 100kΩ 1/16W J |       | R4924        | NRSA6AJ-123W | MG RESISTOR | 12kΩ 1/16W J  |       |
| R3743        | NRSA6AJ-104W | MG RESISTOR | 100kΩ 1/16W J |       | R4925        | NRSA6AJ-0R0W | MG RESISTOR | 0Ω 1/16W J    |       |
| R3744        | NRSA6AD-561W | MG RESISTOR | 560Ω 1/16W D  |       | R4926        | NRSA6AJ-0R0W | MG RESISTOR | 0Ω 1/16W J    |       |
| R3745        | NRSA6AD-152W | MG RESISTOR | 1.5kΩ 1/16W D |       | R4927        | NRSA6AJ-0R0W | MG RESISTOR | 0Ω 1/16W J    |       |
| R3746        | NRSA6AJ-222W | MG RESISTOR | 2.2kΩ 1/16W J |       | R4928        | NRSA6AJ-0R0W | MG RESISTOR | 0Ω 1/16W J    |       |
| R3747        | NRSA6AJ-102W | MG RESISTOR | 1kΩ 1/16W J   |       | R4929        | NRSA6AJ-0R0W | MG RESISTOR | 0Ω 1/16W J    |       |
| R3748        | NRSA6AJ-474W | MG RESISTOR | 470kΩ 1/16W J |       | R4930        | NRSA6AJ-0R0W | MG RESISTOR | 0Ω 1/16W J    |       |
| R4201        | NRSA6AJ-333W | MG RESISTOR | 33kΩ 1/16W J  |       | R4931        | NRSA6AJ-0R0W | MG RESISTOR | 0Ω 1/16W J    |       |
| R4202        | NRSA63J-470X | MG RESISTOR | 47Ω 1/16W J   |       | R4932        | NRSA6AJ-0R0W | MG RESISTOR | 0Ω 1/16W J    |       |
| R4203        | NRSA6AJ-100W | MG RESISTOR | 10Ω 1/16W J   |       | R4933        | NRSA6AJ-0R0W | MG RESISTOR | 0Ω 1/16W J    |       |
| R4204        | NRSA6AJ-100W | MG RESISTOR | 10Ω 1/16W J   |       | R4934        | NRSA6AJ-0R0W | MG RESISTOR | 0Ω 1/16W J    |       |
| R4301        | NRSA6AJ-220W | MG RESISTOR | 22Ω 1/16W J   |       | R4935        | NRSA6AJ-104W | MG RESISTOR | 100kΩ 1/16W J |       |
| R4302        | NRSA6AJ-0R0W | MG RESISTOR | 0Ω 1/16W J    |       | R4944        | NRSA6AJ-0R0W | MG RESISTOR | 0Ω 1/16W J    |       |
| R4305        | NRSA6AJ-0R0W | MG RESISTOR | 0Ω 1/16W J    |       | R4945        | NRSA6AJ-103W | MG RESISTOR | 10kΩ 1/16W J  |       |
| R4306        | NRSA6AJ-0R0W | MG RESISTOR | 0Ω 1/16W J    |       | R4947        | NRSA6AJ-153W | MG RESISTOR | 15kΩ 1/16W J  |       |
| R4307        | NRSA6AJ-470W | MG RESISTOR | 47Ω 1/16W J   |       | R4948        | NRSA6AJ-103W | MG RESISTOR | 10kΩ 1/16W J  |       |
| R4308        | NRSA6AJ-470W | MG RESISTOR | 47Ω 1/16W J   |       | R4949        | NRSA6AJ-0R0W | MG RESISTOR | 0Ω 1/16W J    |       |
| R4309        | NRSA6AJ-0R0W | MG RESISTOR | 0Ω 1/16W J    |       | R4950        | NRSA6AJ-683W | MG RESISTOR | 68kΩ 1/16W J  |       |
| R4310        | NRSA6AJ-0R0W | MG RESISTOR | 0Ω 1/16W J    |       | R4951        | NRSA6AJ-102W | MG RESISTOR | 1kΩ 1/16W J   |       |
| R4313        | NRSA6AJ-0R0W | MG RESISTOR | 0Ω 1/16W J    |       | R4952        | NRSA6AJ-102W | MG RESISTOR | 1kΩ 1/16W J   |       |
| R4315        | NRSA6AJ-0R0W | MG RESISTOR | 0Ω 1/16W J    |       | R4953        | NRSA6AJ-102W | MG RESISTOR | 1kΩ 1/16W J   |       |
| R4317        | NRSA6AJ-0R0W | MG RESISTOR | 0Ω 1/16W J    |       | R4954        | NRSA6AJ-102W | MG RESISTOR | 1kΩ 1/16W J   |       |
| R4319        | NRSA6AJ-0R0W | MG RESISTOR | 0Ω 1/16W J    |       | R4955        | NRSA6AJ-101W | MG RESISTOR | 100Ω 1/16W J  |       |
| R4320        | NRSA6AJ-0R0W | MG RESISTOR | 0Ω 1/16W J    |       | R4956        | NRSA6AJ-4R7W | MG RESISTOR | 4.7Ω 1/16W J  |       |
| R4321        | NRSA6AJ-0R0W | MG RESISTOR | 0Ω 1/16W J    |       | R4957        | NRSA6AJ-4R7W | MG RESISTOR | 4.7Ω 1/16W J  |       |
| R4322        | NRSA6AJ-470W | MG RESISTOR | 47Ω 1/16W J   |       | R4958        | NRSA6AJ-0R0W | MG RESISTOR | 0Ω 1/16W J    |       |
| R4323        | NRSA6AJ-101W | MG RESISTOR | 100Ω 1/16W J  |       | R4959        | NRSA6AJ-4R7W | MG RESISTOR | 4.7Ω 1/16W J  |       |
| R4324        | NRSA6AJ-101W | MG RESISTOR | 100Ω 1/16W J  |       | R4960        | NRSA6AJ-4R7W | MG RESISTOR | 4.7Ω 1/16W J  |       |
| R4325        | NRSA6AJ-101W | MG RESISTOR | 100Ω 1/16W J  |       | R4961        | NRSA6AJ-271W | MG RESISTOR | 270Ω 1/16W J  |       |
| R4326        | NRSA6AJ-101W | MG RESISTOR | 100Ω 1/16W J  |       | R4962        | NRSA6AJ-0R0W | MG RESISTOR | 0Ω 1/16W J    |       |
| R4327        | NRSA6AJ-101W | MG RESISTOR | 100Ω 1/16W J  |       | R4963        | NRSA6AJ-0R0W | MG RESISTOR | 0Ω 1/16W J    |       |
| R4701        | NRSA6AJ-103W | MG RESISTOR | 10kΩ 1/16W J  |       | R4964        | NRSA6AJ-0R0W | MG RESISTOR | 0Ω 1/16W J    |       |
| R4702        | NRSA6AJ-104W | MG RESISTOR | 100kΩ 1/16W J |       | R4965        | NRSA6AJ-0R0W | MG RESISTOR | 0Ω 1/16W J    |       |
| R4703        | NRSA6AJ-683W | MG RESISTOR | 68kΩ 1/16W J  |       | R5001        | NRSA6AJ-104W | MG RESISTOR | 100kΩ 1/16W J |       |
| R4704        | NRSA6AJ-153W | MG RESISTOR | 15kΩ 1/16W J  |       | R5003        | NRSA6AJ-220W | MG RESISTOR | 22Ω 1/16W J   |       |
| R4705        | NRSA6AJ-564W | MG RESISTOR | 560kΩ 1/16W J |       | R5004        | NRSA6AJ-220W | MG RESISTOR | 22Ω 1/16W J   |       |
| R4706        | NRSA6AJ-105W | MG RESISTOR | 1MΩ 1/16W J   |       | R5005        | NRSA6AJ-220W | MG RESISTOR | 22Ω 1/16W J   |       |
| R4707        | NRSA6AJ-243W | MG RESISTOR | 24kΩ 1/16W J  |       | R5006        | NRSA6AJ-100W | MG RESISTOR | 10Ω 1/16W J   |       |
| R4708        | NRSA6AJ-331W | MG RESISTOR | 330Ω 1/16W J  |       | R5007        | NRSA6AJ-100W | MG RESISTOR | 10Ω 1/16W J   |       |
| R4709        | NRSA6AJ-103W | MG RESISTOR | 10kΩ 1/16W J  |       | R5008        | NRSA6AJ-0R0W | MG RESISTOR | 0Ω 1/16W J    |       |
| R4710        | NRSA6AJ-105W | MG RESISTOR | 1MΩ 1/16W J   |       | R5009        | NRSA6AJ-470W | MG RESISTOR | 47Ω 1/16W J   |       |
| R4712        | NRSA6AJ-472W | MG RESISTOR | 4.7kΩ 1/16W J |       | R5011        | NRSA6AJ-470W | MG RESISTOR | 47Ω 1/16W J   |       |
| R4713        | NRSA6AJ-102W | MG RESISTOR | 1kΩ 1/16W J   |       | R5012        | NRSA6AJ-102W | MG RESISTOR | 1kΩ 1/16W J   |       |
| R4714        | NRSA6AJ-683W | MG RESISTOR | 68kΩ 1/16W J  |       | R5013        | NRSA6AJ-102W | MG RESISTOR | 1kΩ 1/16W J   |       |
| R4715        | NRSA6AJ-472W | MG RESISTOR | 4.7kΩ 1/16W J |       | R5014        | NRSA6AJ-102W | MG RESISTOR | 1kΩ 1/16W J   |       |
| R4716        | NRSA6AJ-104W | MG RESISTOR | 100kΩ 1/16W J |       | R6001        | NRSA6AJ-224W | MG RESISTOR | 220kΩ 1/16W J |       |
| R4717        | NRSA6AJ-103W | MG RESISTOR | 10kΩ 1/16W J  |       | △ R6002      | NRSA63J-471X | MG RESISTOR | 470Ω 1/16W J  |       |
| R4718        | NRSA6AJ-104W | MG RESISTOR | 100kΩ 1/16W J |       | △ R6003      | NRSA63J-102X | MG RESISTOR | 1kΩ 1/16W J   |       |
| R4722        | NRSA6AJ-822W | MG RESISTOR | 8.2kΩ 1/16W J |       | R6005        | NRSA6AD-513W | MG RESISTOR | 51kΩ 1/16W D  |       |
| R4723        | NRSA6AJ-103W | MG RESISTOR | 10kΩ 1/16W J  |       | R6006        | NRSA6AD-243W | MG RESISTOR | 24kΩ 1/16W D  |       |
| R4724        | NRSA6AJ-103W | MG RESISTOR | 10kΩ 1/16W J  |       | R6101        | NRSA6AD-103W | MG RESISTOR | 10kΩ 1/16W D  |       |
| R4725        | NRSA6AJ-0R0W | MG RESISTOR | 0Ω 1/16W J    |       | R6102        | NRSA6AJ-751W | MG RESISTOR | 750Ω 1/16W J  |       |
| R4726        | NRSA6AJ-0R0W | MG RESISTOR | 0Ω 1/16W J    |       | R6103        | NRSA6AD-622W | MG RESISTOR | 6.2kΩ 1/16W D |       |
| R4727        | NRSA6AJ-0R0W | MG RESISTOR | 0Ω 1/16W J    |       | R6104        | NRSA6AJ-333W | MG RESISTOR | 33kΩ 1/16W J  |       |
| R4728        | NRSA6AJ-0R0W | MG RESISTOR | 0Ω 1/16W J    |       | R6105        | NRSA6AJ-562W | MG RESISTOR | 5.6kΩ 1/16W J |       |
| R4729        | NRSA6AJ-0R0W | MG RESISTOR | 0Ω 1/16W J    |       | R6106        | NRSA6AJ-223W | MG RESISTOR | 22kΩ 1/16W J  |       |
| R4730        | NRSA6AJ-0R0W | MG RESISTOR | 0Ω 1/16W J    |       | R6107        | NRSA6AJ-472W | MG RESISTOR | 4.7kΩ 1/16W J |       |
| R4733        | NRSA6AJ-0R0W | MG RESISTOR | 0Ω 1/16W J    |       | R6108        | NRSA6AJ-823W | MG RESISTOR | 82kΩ 1/16W J  |       |
| R4734        | NRSA6AJ-0R0W | MG RESISTOR | 0Ω 1/16W J    |       | R6109        | NRSA6AJ-823W | MG RESISTOR | 82kΩ 1/16W J  |       |
| R4735        | NRSA6AJ-0R0W | MG RESISTOR | 0Ω 1/16W J    |       | R6110        | NRSA6AD-153W | MG RESISTOR | 15kΩ 1/16W D  |       |
| R4901        | NRSA6AJ-243W | MG RESISTOR | 24kΩ 1/16W J  |       | R6112        | NRSA6AJ-0R0W | MG RESISTOR | 0Ω 1/16W J    |       |
| R4902        | NRSA6AJ-103W | MG RESISTOR | 10kΩ 1/16W J  |       | R6113        | NRSA6AJ-102W | MG RESISTOR | 1kΩ 1/16W J   |       |
| R4903        | NRSA6AJ-822W | MG RESISTOR | 8.2kΩ 1/16W J |       | R6202        | NRSA6AD-223W | MG RESISTOR | 22kΩ 1/16W D  |       |
| R4904        | NRSA6AJ-103W | MG RESISTOR | 10kΩ 1/16W J  |       | R6204        | NRSA6AD-822W | MG RESISTOR | 8.2kΩ 1/16W D |       |
| R4905        | NRSA6AJ-153W | MG RESISTOR | 15kΩ 1/16W J  |       | R6205        | NRSA6AJ-473W | MG RESISTOR | 47kΩ 1/16W J  |       |
| R4906        | NRSA6AJ-684W | MG RESISTOR | 680kΩ 1/16W J |       | R6206        | NRSA6AJ-102W | MG RESISTOR | 1kΩ 1/16W J   |       |
| R4907        | NRSA6AJ-105W | MG RESISTOR | 1MΩ 1/16W J   |       | R6207        | NRSA6AD-183W | MG RESISTOR | 18kΩ 1/16W D  |       |
| R4908        | NRSA6AJ-472W | MG RESISTOR | 4.7kΩ 1/16W J |       | R6208        | NRSA6AD-123W | MG RESISTOR | 12kΩ 1/16W D  |       |
| R4909        | NRSA6AJ-105W | MG RESISTOR | 1MΩ 1/16W J   |       | R6210        | NRSA6AD-123W | MG RESISTOR | 12kΩ 1/16W D  |       |

| △ Symbol No. | Part No.     | Part Name    | Description   | Local | △ Symbol No. | Part No.     | Part Name     | Description  | Local |
|--------------|--------------|--------------|---------------|-------|--------------|--------------|---------------|--------------|-------|
| R6211        | NRSA6AD-153W | MG RESISTOR  | 15kΩ 1/16W D  |       | RA3003       | NRZ0034-100W | NET RESISTOR  | 10Ω 1/32W J  |       |
| R6213        | NRSA6AD-183W | MG RESISTOR  | 18kΩ 1/16W D  |       | RA3004       | NRZ0034-103W | NET RESISTOR  | 10kΩ 1/32W J |       |
| R6215        | NRSA6AD-472W | MG RESISTOR  | 4.7kΩ 1/16W D |       | RA3005       | NRZ0040-0R0X | NET RESISTOR  | 0Ω 1/16W J   |       |
| R6216        | NRSA6AJ-103W | MG RESISTOR  | 10kΩ 1/16W J  |       | RA3201       | NRZ0034-101W | NET RESISTOR  | 100Ω 1/32W J |       |
| R6217        | NRSA6AJ-152W | MG RESISTOR  | 1.5kΩ 1/16W J |       | RA3202       | NRZ0034-101W | NET RESISTOR  | 100Ω 1/32W J |       |
| R6219        | NRSA6AD-243W | MG RESISTOR  | 24kΩ 1/16W D  |       | RA4201       | NRZ0034-100W | NET RESISTOR  | 10Ω 1/32W J  |       |
| R6220        | NRSA6AD-302W | MG RESISTOR  | 3kΩ 1/16W D   |       | RA4202       | NRZ0034-100W | NET RESISTOR  | 10Ω 1/32W J  |       |
| R6221        | NRSA6AD-104W | MG RESISTOR  | 100kΩ 1/16W D |       | RA4301       | NRZ0034-101W | NET RESISTOR  | 100Ω 1/32W J |       |
| R6222        | NRSA6AD-123W | MG RESISTOR  | 12kΩ 1/16W D  |       | RA4302       | NRZ0034-101W | NET RESISTOR  | 100Ω 1/32W J |       |
| R6223        | NRSA6AD-103W | MG RESISTOR  | 10kΩ 1/16W D  |       | RA4303       | NRZ0034-101W | NET RESISTOR  | 100Ω 1/32W J |       |
| R6225        | NRSA6AD-473W | MG RESISTOR  | 47kΩ 1/16W D  |       | RA4304       | NRZ0034-101W | NET RESISTOR  | 100Ω 1/32W J |       |
| R6226        | NRSA6AD-562W | MG RESISTOR  | 5.6kΩ 1/16W D |       | RA4305       | NRZ0034-100W | NET RESISTOR  | 10Ω 1/32W J  |       |
| R6227        | NRSA6AD-273W | MG RESISTOR  | 27kΩ 1/16W D  |       | RA4306       | NRZ0034-100W | NET RESISTOR  | 10Ω 1/32W J  |       |
| R6228        | NRSA6AD-473W | MG RESISTOR  | 47kΩ 1/16W D  |       | RA4307       | NRZ0034-100W | NET RESISTOR  | 10Ω 1/32W J  |       |
| R6229        | NRSA6AJ-272W | MG RESISTOR  | 2.7kΩ 1/16W J |       | RA4308       | NRZ0034-100W | NET RESISTOR  | 10Ω 1/32W J  |       |
| R6230        | NRSA6AD-473W | MG RESISTOR  | 47kΩ 1/16W D  |       | RA8001       | NRZ0034-101W | NET RESISTOR  | 100Ω 1/32W J |       |
| R6231        | NRSA6AD-332W | MG RESISTOR  | 3.3kΩ 1/16W D |       | RA8002       | NRZ0034-101W | NET RESISTOR  | 100Ω 1/32W J |       |
| R6232        | NRSA6AD-123W | MG RESISTOR  | 12kΩ 1/16W D  |       | RA8003       | NRZ0034-101W | NET RESISTOR  | 100Ω 1/32W J |       |
| R6233        | NRSA6AD-203W | MG RESISTOR  | 20kΩ 1/16W D  |       | RA8004       | NRZ0034-101W | NET RESISTOR  | 100Ω 1/32W J |       |
| R6234        | NRSA6AJ-101W | MG RESISTOR  | 100Ω 1/16W J  |       |              |              |               |              |       |
| R6235        | NRSA6AJ-222W | MG RESISTOR  | 2.2kΩ 1/16W J |       | L1001        | NQL402M-100X | COIL          | 10uH M       |       |
| R6236        | NRSA6AD-563W | MG RESISTOR  | 56kΩ 1/16W D  |       | L1002        | NQL402M-100X | COIL          | 10uH M       |       |
| R6237        | NRSA6AD-473W | MG RESISTOR  | 47kΩ 1/16W D  |       | L2101        | NQL402M-100X | COIL          | 10uH M       |       |
| R6238        | NRSA6AJ-104W | MG RESISTOR  | 100kΩ 1/16W J |       | L2401        | NQL402M-100X | COIL          | 10uH M       |       |
| R6239        | NRSA6AJ-0R0W | MG RESISTOR  | 0Ω 1/16W J    |       | L2402        | NQL402M-100X | COIL          | 10uH M       |       |
| R6701        | NRV142F-R20X | CMF RESISTOR | 0.2Ω 1/4W F   |       | L2601        | NQR0269-013X | FERRITE BEADS |              |       |
| R6702        | NRSA6AD-104W | MG RESISTOR  | 100kΩ 1/16W D |       | L2602        | NQR0269-013X | FERRITE BEADS |              |       |
| R6703        | NRSA6AD-123W | MG RESISTOR  | 12kΩ 1/16W D  |       | L2603        | NQR0269-013X | FERRITE BEADS |              |       |
| R6704        | NRSA6AD-823W | MG RESISTOR  | 82kΩ 1/16W D  |       | L2651        | NQR0269-013X | FERRITE BEADS |              |       |
| R6705        | NRSA6AD-333W | MG RESISTOR  | 33kΩ 1/16W D  |       | L2652        | NQR0269-013X | FERRITE BEADS |              |       |
| R6706        | NRSA63J-0R0X | MG RESISTOR  | 0Ω 1/16W J    |       | L2653        | NQR0269-013X | FERRITE BEADS |              |       |
| R8002        | NRSA6AJ-103W | MG RESISTOR  | 10kΩ 1/16W J  |       | L2801        | NQR0251-004X | FERRITE BEADS |              |       |
| R8005        | NRSA6AJ-220W | MG RESISTOR  | 22Ω 1/16W J   |       | L2802        | NQR0251-004X | FERRITE BEADS |              |       |
| R8007        | NRSA6AJ-102W | MG RESISTOR  | 1kΩ 1/16W J   |       | L2803        | NRSA63J-0R0X | MG RESISTOR   | 0Ω 1/16W J   |       |
| R8008        | NRSA6AJ-561W | MG RESISTOR  | 560Ω 1/16W J  |       | L2804        | NRSA63J-0R0X | MG RESISTOR   | 0Ω 1/16W J   |       |
| R8009        | NRSA6AJ-105W | MG RESISTOR  | 1MΩ 1/16W J   |       | L2805        | NRSA63J-0R0X | MG RESISTOR   | 0Ω 1/16W J   |       |
| R8011        | NRSA6AJ-0R0W | MG RESISTOR  | 0Ω 1/16W J    |       | L3001        | NQR0129-002X | FERRITE BEADS |              |       |
| R8012        | NRSA6AJ-0R0W | MG RESISTOR  | 0Ω 1/16W J    |       | L3002        | NQR0129-002X | FERRITE BEADS |              |       |
| R8016        | NRSA6AJ-103W | MG RESISTOR  | 10kΩ 1/16W J  |       | L3004        | NQR0006-001X | FERRITE BEADS |              |       |
| R8017        | NRSA6AJ-103W | MG RESISTOR  | 10kΩ 1/16W J  |       | L3005        | NQR0006-001X | FERRITE BEADS |              |       |
| R8019        | NRSA6AJ-0R0W | MG RESISTOR  | 0Ω 1/16W J    |       | L3007        | NQL085J-2R2X | COIL          | 2.2uH J      |       |
| R8021        | NRSA6AJ-0R0W | MG RESISTOR  | 0Ω 1/16W J    |       | L3008        | NQL085J-120X | COIL          | 12uH J       |       |
| R8022        | NRSA6AJ-0R0W | MG RESISTOR  | 0Ω 1/16W J    |       | L3012        | NQR0129-002X | FERRITE BEADS |              |       |
| R8023        | NRSA6AJ-472W | MG RESISTOR  | 4.7kΩ 1/16W J |       | L3015        | NQR0006-001X | FERRITE BEADS |              |       |
| R8025        | NRSA6AJ-472W | MG RESISTOR  | 4.7kΩ 1/16W J |       | L3201        | NQR0129-002X | FERRITE BEADS |              |       |
| R8027        | NRSA6AJ-103W | MG RESISTOR  | 10kΩ 1/16W J  |       | L3202        | NQR0129-002X | FERRITE BEADS |              |       |
| R8028        | NRSA6AJ-103W | MG RESISTOR  | 10kΩ 1/16W J  |       | L3203        | NQR0006-001X | FERRITE BEADS |              |       |
| R8029        | NRSA6AJ-103W | MG RESISTOR  | 10kΩ 1/16W J  |       | L3204        | NQL38DK-100X | P COIL        | 10uH K       |       |
| R8030        | NRSA6AJ-103W | MG RESISTOR  | 10kΩ 1/16W J  |       | L3501        | NQR0129-002X | FERRITE BEADS |              |       |
| R8031        | NRSA6AJ-100W | MG RESISTOR  | 10Ω 1/16W J   |       | L3502        | NQL402M-100X | COIL          | 10uH M       |       |
| R8032        | NRSA6AJ-0R0W | MG RESISTOR  | 0Ω 1/16W J    |       | L3503        | NQR0006-001X | FERRITE BEADS |              |       |
| R8033        | NRSA63J-0R0X | MG RESISTOR  | 0Ω 1/16W J    |       | L3504        | NQR0006-001X | FERRITE BEADS |              |       |
| R8036        | NRSA6AJ-220W | MG RESISTOR  | 22Ω 1/16W J   |       | L3505        | NQR0006-001X | FERRITE BEADS |              |       |
| R8037        | NRSA6AJ-221W | MG RESISTOR  | 220Ω 1/16W J  |       | L3701        | NQL38DK-100X | P COIL        | 10uH K       |       |
| R8041        | NRSA6AJ-220W | MG RESISTOR  | 22Ω 1/16W J   |       | L3731        | NQL085J-6R8X | COIL          | 6.8uH J      |       |
| R8042        | NRSA6AJ-220W | MG RESISTOR  | 22Ω 1/16W J   |       | L3732        | NQL085J-6R8X | COIL          | 6.8uH J      |       |
| R8302        | NRS181J-220X | MG RESISTOR  | 22Ω 1/8W J    |       | L4201        | NQL38DK-100X | P COIL        | 10uH K       |       |
| R8303        | NRS181J-220X | MG RESISTOR  | 22Ω 1/8W J    |       | L4202        | NQL38DK-100X | P COIL        | 10uH K       |       |
| R8306        | NRSA6AJ-103W | MG RESISTOR  | 10kΩ 1/16W J  |       | L4301        | NQR0129-002X | FERRITE BEADS |              |       |
| R8307        | NRSA6AJ-103W | MG RESISTOR  | 10kΩ 1/16W J  |       | L4302        | NQR0129-002X | FERRITE BEADS |              |       |
| R8308        | NRSA6AJ-103W | MG RESISTOR  | 10kΩ 1/16W J  |       | L4701        | NQL38DK-100X | P COIL        | 10uH K       |       |
| R8309        | NRSA6AJ-103W | MG RESISTOR  | 10kΩ 1/16W J  |       | L4901        | NQR0129-002X | FERRITE BEADS |              |       |
| R8310        | NRSA6AJ-153W | MG RESISTOR  | 15kΩ 1/16W J  |       | L4902        | NQL38DK-100X | P COIL        | 10uH K       |       |
| R8313        | NRSA6AJ-0R0W | MG RESISTOR  | 0Ω 1/16W J    |       | L4953        | NQR0129-002X | FERRITE BEADS |              |       |
| R8314        | NRSA6AJ-105W | MG RESISTOR  | 1MΩ 1/16W J   |       | L4954        | NQL38DK-100X | P COIL        | 10uH K       |       |
| R8315        | NRSA6AJ-105W | MG RESISTOR  | 1MΩ 1/16W J   |       | L4955        | NQL38DK-100X | P COIL        | 10uH K       |       |
| R8316        | NRSA6AJ-104W | MG RESISTOR  | 100kΩ 1/16W J |       | L5001        | NQL38DK-100X | P COIL        | 10uH K       |       |
| R8317        | NRSA6AJ-154W | MG RESISTOR  | 150kΩ 1/16W J |       | L5002        | NQR0129-002X | FERRITE BEADS |              |       |
| RA1001       | NRZ0034-473W | NET RESISTOR | 47kΩ 1/32W J  |       | L5003        | NQR0129-002X | FERRITE BEADS |              |       |
| RA1002       | NRZ0034-104W | NET RESISTOR | 100kΩ 1/32W J |       | L5004        | NQR0129-002X | FERRITE BEADS |              |       |
| RA1003       | NRZ0034-104W | NET RESISTOR | 100kΩ 1/32W J |       | L5005        | NQL38DK-100X | P COIL        | 10uH K       |       |
| RA1004       | NRZ0034-104W | NET RESISTOR | 100kΩ 1/32W J |       | L5006        | NQL38DK-100X | P COIL        | 10uH K       |       |
| RA1005       | NRZ0034-103W | NET RESISTOR | 10kΩ 1/32W J  |       | L5009        | NQL38DK-100X | P COIL        | 10uH K       |       |
| RA1006       | NRZ0034-102W | NET RESISTOR | 1kΩ 1/32W J   |       | L5011        | NQL38DK-100X | P COIL        | 10uH K       |       |
| RA1007       | NRZ0034-102W | NET RESISTOR | 1kΩ 1/32W J   |       | L6001        | NQL62EM-820X | COIL          | 82uH M       |       |
| RA1008       | NRZ0034-104W | NET RESISTOR | 100kΩ 1/32W J |       | L6101        | NQL62EM-100X | COIL          | 10uH M       |       |
| RA3001       | NRZ0034-560W | NET RESISTOR | 56Ω 1/32W J   |       | L6102        | NQL62EM-100X | COIL          | 10uH M       |       |
| RA3002       | NRZ0034-560W | NET RESISTOR | 56Ω 1/32W J   |       | L6201        | NQL62EM-390X | COIL          | 39uH M       |       |

| △ Symbol No. | Part No.        | Part Name        | Description               | Local |
|--------------|-----------------|------------------|---------------------------|-------|
| L6202        | NQL62EM-390X    | COIL             | 39uH M                    |       |
| L6203        | NQL62EM-100X    | COIL             | 10uH M                    |       |
| L6204        | NQL144K-220X    | P COIL           | 22uH K                    |       |
| L6205        | NQL62EM-470X    | COIL             | 47uH M                    |       |
| L6206        | NQL62EM-470X    | COIL             | 47uH M                    |       |
| L6207        | NQLZ011-221X    | COIL             | 220uH M                   |       |
| L6208        | NQL38DK-100X    | P COIL           | 10uH K                    |       |
| L6701        | NQL52EM-100X    | COIL             | 10uH M                    |       |
| L8001        | NQR0129-002X    | FERRITE BEADS    |                           |       |
| L8002        | NQR0129-002X    | FERRITE BEADS    |                           |       |
| L8003        | NQR0129-002X    | FERRITE BEADS    |                           |       |
| L8004        | NQR0006-001X    | FERRITE BEADS    |                           |       |
| L8005        | NQR0129-002X    | FERRITE BEADS    |                           |       |
| L8006        | NQR0006-001X    | FERRITE BEADS    |                           |       |
| L8301        | NQR0129-002X    | FERRITE BEADS    |                           |       |
| CN101        | QGF0532F2-21X   | CONNECTOR        | BATT TERM. FFC/FPC (1-21) |       |
| CN102        | QGF0517F2-20X   | CONNECTOR        | CCD FFC/FPC (1-20)        |       |
| CN103        | QGF0537F2-30X   | CONNECTOR        | MDA PWB FFC/FPC (1-30)    |       |
| CN104        | QGF0307F2-39W   | CONNECTOR        | MONI PWB FFC/FPC (1-39)   |       |
| CN105        | QGB0512L4-40X   | CONNECTOR        | JIG CN B-B (1-40)         |       |
| CN106        | QGF0517F2-16X   | CONNECTOR        | SENSOR FFC/FPC (1-16)     |       |
| CN107        | QGF0537F1-28X   | CONNECTOR        | OP FFC/FPC (1-28)         |       |
| CN108        | QGF0517F2-07X   | CONNECTOR        | POWER SW FFC/FPC (1-7)    |       |
| CN109        | QGF0532F2-13X   | CONNECTOR        | OPERATION FFC/FPC (1-13)  |       |
| CN110        | QGF0517F1-08X   | CONNECTOR        | HEAD FFC/FPC (1-8)        |       |
| CN111        | QGA1001F1-04X   | CONNECTOR        | INT MIC W-B (1-4)         |       |
| CN112        | QGF0517F2-12X   | CONNECTOR        | FRONT PWB FFC/FPC (1-12)  |       |
| CN113        | QGF0532F2-22X   | CONNECTOR        | VF PWB FFC/FPC (1-22)     |       |
| CN114        | QGF0532F2-12X   | CONNECTOR        | SD PWB FFC/FPC (1-12)     |       |
| CN115        | QGF0532F2-06X   | CONNECTOR        | SUB OPE FFC/FPC (1-6)     |       |
| △ F4951      | NMFZ007-R20X-K  | FUSE             | 0.2A 50V                  |       |
| △ F4952      | NMFZ007-R20X-K  | FUSE             | 0.2A 50V                  |       |
| △ F6001      | NMFZ007-1R0X-K  | FUSE             | 1A 32V                    |       |
| △ F6101      | NMFZ007-2R0X-K  | FUSE             | 2A 32V                    |       |
| △ F6201      | NMFZ007-1R25X-K | FUSE             | 1.25A 32V                 |       |
| J101         | QNS0233-001     | 3.5 JACK         | EXT MIC                   |       |
| J102         | QNZ0497-001     | USB(B) CONNECTOR | USB USB(MINI-B)           |       |
| J103         | QNZ0669-002     | M CONNECTOR      | MULTI                     |       |
| J104         | QNA0037-002     | DC JACK          | DC JACK                   |       |
| J105         | QNZ0518-002     | D CONNECTOR      | DV                        |       |
| X1001        | NAX0645-001X    | CRYSTAL          |                           |       |
| X1002        | NAX0564-001X    | CRYSTAL          |                           |       |
| X3002        | NAX0480-001X    | CRYSTAL          | 24.576MHz                 |       |
| X5001        | NAX0587-001X    | CXO              |                           |       |
| X8301        | NAX0612-001X    | C RESONATOR      |                           |       |
| OT1          | LY30034-024A    | SPACER(A)        | IC8003                    |       |
| OT2          | LY44158-001A    | SHEET(SHIELD)    |                           |       |
| OT3          | LY44621-001A    | SPACER           | MIC WIRE                  |       |
| OT4          | LY44622-001A    | SPACER           | FRONT FFC                 |       |
| OT5          | LY30034-055A    | SPACER(A)        | FOR J101                  |       |
| OT6          | LY30034-063A    | SPACER(A)        | BATT FPC                  |       |
| OT7          | LY30034-055A    | SPACER(A)        | JVM ONLY                  |       |
| SD1          | LY34062-001A    | SHIELD CASE      | PRE/REC                   |       |

### CCD BOARD ASSEMBLY <02>

| △ Symbol No. | Part No.      | Part Name      | Description   | Local |
|--------------|---------------|----------------|---------------|-------|
| PW1          | YB10458A-01   | CCD BOARD ASSY |               |       |
| Q5501        | 2SC3931/CD/-X | TRANSISTOR     |               |       |
| C5501        | NBZ0003-475X  | TA E CAPACITOR | 4.7uF 20V M   |       |
| C5502        | NCB21EK-104X  | C CAPACITOR    | 0.1uF 25V K   |       |
| C5503        | NBE21AM-106X  | TA E CAPACITOR | 10uF 10V M    |       |
| C5504        | NCB31CK-104X  | C CAPACITOR    | 0.1uF 16V K   |       |
| C5505        | NCB21EK-104X  | C CAPACITOR    | 0.1uF 25V K   |       |
| C5506        | NCB31CK-104X  | C CAPACITOR    | 0.1uF 16V K   |       |
| C5507        | NCB31HK-222X  | C CAPACITOR    | 2200pF 50V K  |       |
| R5501        | NRSA63J-182X  | MG RESISTOR    | 1.8kΩ 1/16W J |       |
| R5503        | NRSA63J-0R0X  | MG RESISTOR    | 0Ω 1/16W J    |       |
| R5506        | NRSA02J-0R0X  | MG RESISTOR    | 0Ω 1/10W J    |       |
| R5507        | NRSA63J-0R0X  | MG RESISTOR    | 0Ω 1/16W J    |       |

| △ Symbol No. | Part No.     | Part Name | Description | Local |
|--------------|--------------|-----------|-------------|-------|
| L5501        | NQL38DK-100X | P COIL    | 10uH K      |       |
| L5502        | NQL38DK-100X | P COIL    | 10uH K      |       |

### MDA BOARD ASSEMBLY <03>

| △ Symbol No. | Part No.       | Part Name       | Description               | Local |
|--------------|----------------|-----------------|---------------------------|-------|
| PW1          | YB10459A-01    | MDA BOARD ASSY  |                           |       |
| △ IC1601     | BD6637KV       | IC              | MDA 64PIN                 |       |
| Q1601        | UMC3N-W        | DIGI TRANSISTOR | LD ON                     |       |
| D1602        | DAP222-X       | DIODE ARRAY     | LD OUT                    |       |
| D1602 or     | MA132WA-X      | SI DIODE        |                           |       |
| D1603        | DAP222-X       | DIODE ARRAY     | LD ON                     |       |
| D1603 or     | MA132WA-X      | SI DIODE        |                           |       |
| D1604        | DAP222-X       | DIODE ARRAY     | C.ERR-3V                  |       |
| D1604 or     | MA132WA-X      | SI DIODE        |                           |       |
| C1601        | NCBA1CK-103W   | C CAPACITOR     | 0.01uF 16V K              |       |
| C1602        | NBZ0015-106X   | TA E CAPACITOR  | 10uF 6.3V M               |       |
| C1603        | NBZ0015-106X   | TA E CAPACITOR  | 10uF 6.3V M               |       |
| C1605        | NCBA1AK-104W   | C CAPACITOR     | 0.1uF 10V K               |       |
| C1606        | NCBA1HK-152W   | C CAPACITOR     | 1500pF 50V K              |       |
| C1607        | NCBA1CK-473W   | C CAPACITOR     | 0.047uF 16V K             |       |
| C1614        | NBE91AM-475X   | TA E CAPACITOR  | 4.7uF 10V M               |       |
| C1618        | NCBA1HK-222W   | C CAPACITOR     | 2200pF 50V K              |       |
| C1619        | NCBA1HK-222W   | C CAPACITOR     | 2200pF 50V K              |       |
| C1620        | NCBA1HK-222W   | C CAPACITOR     | 2200pF 50V K              |       |
| C1621        | NCB30JK-105X   | C CAPACITOR     | 1uF 6.3V K                |       |
| C1622        | NCBA1CK-223W   | C CAPACITOR     | 0.022uF 16V K             |       |
| C1623        | NCBA1AK-473W   | C CAPACITOR     | 0.047uF 10V K             |       |
| C1624        | NCBA1CK-103W   | C CAPACITOR     | 0.01uF 16V K              |       |
| C1625        | NDCA1HJ-101W   | C CAPACITOR     | 100pF 50V J               |       |
| C1626        | NCBA1EK-472W   | C CAPACITOR     | 4700pF 25V K              |       |
| C1627        | NCBA1EK-472W   | C CAPACITOR     | 4700pF 25V K              |       |
| C1628        | NCB31CK-224X   | C CAPACITOR     | 0.22uF 16V K              |       |
| C1629        | NCJ31EK-224X-A | C CAPACITOR     | 0.22uF 25V K              |       |
| C1630        | NCJ31EK-224X-A | C CAPACITOR     | 0.22uF 25V K              |       |
| C1631        | NBZ0015-106X   | TA E CAPACITOR  | 10uF 6.3V M               |       |
| C1632        | NCB21CK-474X   | C CAPACITOR     | 0.47uF 16V K              |       |
| C1633        | NCB30JK-474X   | C CAPACITOR     | 0.47uF 6.3V K             |       |
| R1601        | NRSA6AJ-681W   | MG RESISTOR     | 680Ω 1/16W J              |       |
| R1602        | NRSA6AJ-124W   | MG RESISTOR     | 120kΩ 1/16W J             |       |
| R1603        | NRSA6AJ-472W   | MG RESISTOR     | 4.7kΩ 1/16W J             |       |
| R1604        | NRSA6AJ-104W   | MG RESISTOR     | 100kΩ 1/16W J             |       |
| R1610        | NRSA6AJ-391W   | MG RESISTOR     | 390Ω 1/16W J              |       |
| R1611        | NRSA6AJ-391W   | MG RESISTOR     | 390Ω 1/16W J              |       |
| R1612        | NRSA6AJ-104W   | MG RESISTOR     | 100kΩ 1/16W J             |       |
| R1613        | NRSA6AJ-102W   | MG RESISTOR     | 1kΩ 1/16W J               |       |
| R1614        | NRZ0072-R330X  | MG RESISTOR     | 0.33Ω 1/4W F              |       |
| R1616        | NRSA6AD-392W   | MG RESISTOR     | 3.9kΩ 1/16W D             |       |
| R1617        | NRZ0072-R330X  | MG RESISTOR     | 0.33Ω 1/4W F              |       |
| R1620        | NRSA6AJ-683W   | MG RESISTOR     | 68kΩ 1/16W J              |       |
| R1621        | NRSA6AJ-103W   | MG RESISTOR     | 10kΩ 1/16W J              |       |
| R1622        | NRSA6AJ-103W   | MG RESISTOR     | 10kΩ 1/16W J              |       |
| R1624        | NRSA6AD-183W   | MG RESISTOR     | 18kΩ 1/16W D              |       |
| R1625        | NRSA6AD-681W   | MG RESISTOR     | 680Ω 1/16W D              |       |
| R1629        | NRSA6AJ-564W   | MG RESISTOR     | 560kΩ 1/16W J             |       |
| R1630        | NRSA6AJ-0R0W   | MG RESISTOR     | 0Ω 1/16W J                |       |
| R1631        | NRSA6AJ-0R0W   | MG RESISTOR     | 0Ω 1/16W J                |       |
| R1635        | NRSA6AJ-332W   | MG RESISTOR     | 3.3kΩ 1/16W J             |       |
| R1636        | NRSA6AJ-123W   | MG RESISTOR     | 12kΩ 1/16W J              |       |
| R1637        | NRSA6AJ-154W   | MG RESISTOR     | 150kΩ 1/16W J             |       |
| R1638        | NRSA6AJ-0R0W   | MG RESISTOR     | 0Ω 1/16W J                |       |
| R1639        | NRSA02J-0R0X   | MG RESISTOR     | 0Ω 1/10W J                |       |
| R1640        | NRSA02J-0R0X   | MG RESISTOR     | 0Ω 1/10W J                |       |
| R1641        | NRSA6AJ-0R0W   | MG RESISTOR     | 0Ω 1/16W J                |       |
| R1642        | NRSA6AJ-0R0W   | MG RESISTOR     | 0Ω 1/16W J                |       |
| L1601        | NQL382M-100X   | COIL            | 10uH M                    |       |
| CN301        | QGF0532F2-18X  | CONNECTOR       | CAPSTAN FFC/FPC (1-18)    |       |
| CN302        | QGF0532F2-11X  | CONNECTOR       | DRUM MOTOR FFC/FPC (1-11) |       |

| △ Symbol No. | Part No.       | Part Name   | Description              | Local |
|--------------|----------------|-------------|--------------------------|-------|
| CN303        | QGF0532F2-06X  | CONNECTOR   | RENCODER FFC/FPC (1-6)   |       |
| CN304        | QGF0517F2-06X  | CONNECTOR   | LOAD MOTOR FFC/FPC (1-6) |       |
| CN305        | QGF0537F1-30X  | CONNECTOR   | MAIN PWB FFC/FPC (1-30)  |       |
| △ F1601      | NMFZ007-R20X-K | FUSE        | 0.2A 50V                 |       |
| △ F1602      | NMFZ007-R50X-K | FUSE        | 0.5A 50V                 |       |
| OT1          | LY44587-001A   | SHEET(MDA)  | MECHA                    |       |
| OT2          | LY30034-039A   | SPACER(A)   | IC1601                   |       |
| OT3          | LY30034-036A   | SPACER(A)   | FOR IC1001               |       |
| OT4          | LY30034-037A   | SPACER(A)   | FOR IC2201               |       |
| WR1          | WJT0142-001B   | E-CARD WIRE | MAIN PWB                 |       |

### FRONT BOARD ASSEMBLY <04>

| △ Symbol No. | Part No.        | Part Name        | Description             | Local |
|--------------|-----------------|------------------|-------------------------|-------|
| PW1          | YB10460A-01     | FRONT BOARD ASSY |                         |       |
| IC401        | RPM7138-S       | IR DETECT UNIT   | IR                      |       |
| Q401         | RPM-22PB        | PHOTO TRANSISTOR | W/B                     |       |
| Q6501        | DTC114EM-X      | DIGI TRANSISTOR  |                         |       |
| Q6502        | EMT1-W          | PAIR TRANSISTOR  |                         |       |
| Q6503        | EMT1-W          | PAIR TRANSISTOR  |                         |       |
| Q6504        | 2SA2029/QRS/-X  | TRANSISTOR       |                         |       |
| D401         | SML-211UT-X     | LED              | TALLY                   |       |
| D6501        | LWE67C/U2V/4/-X | LED              | WHITE                   |       |
| D6502        | LWE67C/U2V/4/-X | LED              | WHITE                   |       |
| D6503        | LWE67C/U2V/4/-X | LED              | WHITE                   |       |
| D6504        | LWE67C/U2V/4/-X | LED              | WHITE                   |       |
| C401         | NBXJ0JM-106X    | TA E CAPACITOR   |                         |       |
| C402         | NCBA1AK-104W    | C CAPACITOR      | 0.1uF 10V K             |       |
| R401         | NRSA6AJ-152W    | MG RESISTOR      | 1.5kΩ 1/16W J           |       |
| R402         | NRSA6AJ-470W    | MG RESISTOR      | 47Ω 1/16W J             |       |
| R6501        | NRSA6AJ-561W    | MG RESISTOR      | 560Ω 1/16W J            |       |
| R6502        | NRSA6AJ-121W    | MG RESISTOR      | 120Ω 1/16W J            |       |
| R6503        | NRSA6AJ-120W    | MG RESISTOR      | 12Ω 1/16W J             |       |
| R6504        | NRSA6AJ-120W    | MG RESISTOR      | 12Ω 1/16W J             |       |
| R6505        | NRSA6AJ-120W    | MG RESISTOR      | 12Ω 1/16W J             |       |
| R6506        | NRSA6AJ-120W    | MG RESISTOR      | 12Ω 1/16W J             |       |
| L401         | NQR0265-001X    | FERRITE BEADS    |                         |       |
| BT401        | QAB0040-001     | LITHIUM BATTERY  |                         |       |
| CN401        | QGF0532F2-12X   | CONNECTOR        | MAIN PWB FFC/FPC (1-12) |       |
| S401         | NSW0122-001X    | DETECT SWITCH    | EJECT SW                |       |
| OT1          | LY30034-038A    | SPACER(A)        | BT401                   |       |
| OT2          | LY30034-028A    | SPACER(A)        | Q401                    |       |
| OT3          | LY30034-042A    | SPACER(A)        | FOR FFC                 |       |

### MONITOR BOARD ASSEMBLY <05>

| △ Symbol No. | Part No.      | Part Name          | Description   | Local |
|--------------|---------------|--------------------|---------------|-------|
| PW1          | YB10461A-02   | MONITOR BOARD ASSY |               |       |
| IC7601       | CXA3657R      | IC                 | SONY MT+VF    |       |
| IC7602       | MM1613BN-X    | IC                 | 3.1V          |       |
| IC7604       | DN8797MS-X    | IC                 |               |       |
| Q7501        | 2SD1664/QR/-W | TRANSISTOR         |               |       |
| Q7502        | 2SD1664/QR/-W | TRANSISTOR         |               |       |
| Q7503        | DTA144EE-X    | DIGI TRANSISTOR    |               |       |
| Q7503 or     | RN2104-X      | DIGI TRANSISTOR    |               |       |
| Q7503 or     | UN9113J-X     | DIGI TRANSISTOR    |               |       |
| Q7504        | 2SC4617/QR/-X | TRANSISTOR         |               |       |
| Q7504 or     | 2SC4738/YG/-X | TRANSISTOR         |               |       |
| D7601        | UDZS5.6B-X    | Z DIODE            | 1.5kΩ 1/10W J |       |
| C7501        | NCZ1016-150X  | C CAPACITOR        | 15pF 2kV J    |       |

| △ Symbol No. | Part No.     | Part Name      | Description   | Local |
|--------------|--------------|----------------|---------------|-------|
| C7502        | NCZ1016-150X | C CAPACITOR    | 15pF 2kV J    |       |
| C7503        | NFV41HJ-183X | MPPS CAPACITOR | 0.018uF 50V J |       |
| C7504        | NCB31EK-103X | C CAPACITOR    | 0.01uF 25V K  |       |
| C7510        | NCB10JK-106X | C CAPACITOR    | 10uF 6.3V K   |       |
| C7602        | NCB31EK-103X | C CAPACITOR    | 0.01uF 25V K  |       |
| C7603        | NCB30JK-105X | C CAPACITOR    | 1uF 6.3V K    |       |
| C7607        | NBE20JM-106X | TA E CAPACITOR | 10uF 6.3V M   |       |
| C7608        | NCB31CK-223X | C CAPACITOR    | 0.022uF 16V K |       |
| C7609        | NBE21AM-335X | TA E CAPACITOR | 3.3uF 10V M   |       |
| C7610        | NCB31HK-682X | C CAPACITOR    | 6800pF 50V K  |       |
| C7611        | NCB31CK-104X | C CAPACITOR    | 0.1uF 16V K   |       |
| C7612        | NCB31EK-103X | C CAPACITOR    | 0.01uF 25V K  |       |
| C7613        | NCB31CK-104X | C CAPACITOR    | 0.1uF 16V K   |       |
| C7614        | NCB31CK-104X | C CAPACITOR    | 0.1uF 16V K   |       |
| C7615        | NCB31CK-104X | C CAPACITOR    | 0.1uF 16V K   |       |
| C7616        | NCB31CK-104X | C CAPACITOR    | 0.1uF 16V K   |       |
| C7617        | NBE21AM-106X | TA E CAPACITOR | 10uF 10V M    |       |
| C7618        | NCB20JM-475X | C CAPACITOR    | 4.7uF 6.3V M  |       |
| C7619        | NCB20JM-475X | C CAPACITOR    | 4.7uF 6.3V M  |       |
| C7620        | NCB21CK-474X | C CAPACITOR    | 0.47uF 16V K  |       |
| C7621        | NCB21CK-105X | C CAPACITOR    | 1uF 16V K     |       |
| C7622        | NCB20JM-475X | C CAPACITOR    | 4.7uF 6.3V M  |       |
| C7623        | NCB31CK-104X | C CAPACITOR    | 0.1uF 16V K   |       |
| C7624        | NCB31CK-104X | C CAPACITOR    | 0.1uF 16V K   |       |
| C7625        | NBE20JM-106X | TA E CAPACITOR | 10uF 6.3V M   |       |
| C7626        | NCB31CK-104X | C CAPACITOR    | 0.1uF 16V K   |       |
| C7627        | NCB31CK-104X | C CAPACITOR    | 0.1uF 16V K   |       |
| C7628        | NCB31CK-104X | C CAPACITOR    | 0.1uF 16V K   |       |
| C7629        | NCB21CK-105X | C CAPACITOR    | 1uF 16V K     |       |
| C7630        | NCB21CK-105X | C CAPACITOR    | 1uF 16V K     |       |

|       |              |             |              |
|-------|--------------|-------------|--------------|
| R7501 | NRSA63J-102X | MG RESISTOR | 1kΩ 1/16W J  |
| R7502 | NRSA63J-102X | MG RESISTOR | 1kΩ 1/16W J  |
| R7506 | NRSA63J-473X | MG RESISTOR | 47kΩ 1/16W J |
| R7507 | NRSA63J-473X | MG RESISTOR | 47kΩ 1/16W J |
| R7606 | NRSA63J-0R0X | MG RESISTOR | 0Ω 1/16W J   |
| R7608 | NRSA63J-103X | MG RESISTOR | 10kΩ 1/16W J |
| R7609 | NRSA63J-0R0X | MG RESISTOR | 0Ω 1/16W J   |
| R7610 | NRSA63J-0R0X | MG RESISTOR | 0Ω 1/16W J   |
| R7611 | NRSA63J-0R0X | MG RESISTOR | 0Ω 1/16W J   |
| R7612 | NRSA63J-0R0X | MG RESISTOR | 0Ω 1/16W J   |
| R7613 | NRSA63J-0R0X | MG RESISTOR | 0Ω 1/16W J   |
| R7614 | NRSA63J-100X | MG RESISTOR | 10Ω 1/16W J  |
| R7615 | NRSA63J-100X | MG RESISTOR | 10Ω 1/16W J  |
| R7616 | NRSA63J-100X | MG RESISTOR | 10Ω 1/16W J  |
| R7618 | NRSA63J-105X | MG RESISTOR | 1MΩ 1/16W J  |

|         |              |             |            |
|---------|--------------|-------------|------------|
| L7501   | NQL76EM-680X | COIL        | 68uH M     |
| L7502   | NQL76EM-220X | COIL        | 22uH M     |
| L7601   | NQL04DK-100X | COIL        | 10uH K     |
| L7602   | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J |
| L7603   | NQL38DK-101X | P COIL      | 100uH K    |
| L7604   | NQL04DK-100X | COIL        | 10uH K     |
| △ T7501 | NQS0060-001X | SW TARN SF  |            |

|         |                |                |                     |
|---------|----------------|----------------|---------------------|
| CN7601  | QGF0530F3-20W  | CONNECTOR      | MAIN FFC/FPC (1-20) |
| CN7602  | QGF0530F3-20W  | CONNECTOR      | MAIN FFC/FPC (1-20) |
| CN7603  | QGF0530F3-24W  | CONNECTOR      | LCD FFC/FPC (1-24)  |
| △ F7501 | NMFZ007-R40X-K | FUSE           | 0.4A 50V            |
| OT1     | LY44581-001A   | SHEET(CUSHION) |                     |
| WR1     | QAL0548-001    | FPC            |                     |

### VF BOARD ASSEMBLY <06>

| △ Symbol No. | Part No.       | Part Name     | Description   | Local |
|--------------|----------------|---------------|---------------|-------|
| PW1          | YB10462A       | VF BOARD ASSY |               |       |
| Q7001        | 2SC4617/QR/-X  | TRANSISTOR    |               |       |
| Q7001 or     | 2SC4738/YG/-X  | TRANSISTOR    |               |       |
| D7001        | E1S35AW0C501-X | LED           |               |       |
| D7002        | UDZS5.6B-X     | Z DIODE       | 1.5kΩ 1/10W J |       |
| C7003        | NCB31CK-104X   | C CAPACITOR   | 0.1uF 16V K   |       |
| C7004        | NCB21CK-105X   | C CAPACITOR   | 1uF 16V K     |       |

| △ Symbol No. | Part No.      | Part Name    | Description         | Local |
|--------------|---------------|--------------|---------------------|-------|
| R7001        | NRVA63D-682X  | CMF RESISTOR | 6.8kΩ 1/16W D       |       |
| R7002        | NRVA63D-272X  | CMF RESISTOR | 2.7kΩ 1/16W D       |       |
| R7003        | NRVA63D-390X  | CMF RESISTOR | 39Ω 1/16W D         |       |
| R7004        | NRSA63J-105X  | MG RESISTOR  | 1MΩ 1/16W J         |       |
| R7005        | NRSA63J-0R0X  | MG RESISTOR  | 0Ω 1/16W J          |       |
| R7006        | NRSA63J-103X  | MG RESISTOR  | 10kΩ 1/16W J        |       |
| CN7001       | QGF0532F2-20X | CONNECTOR    | MAIN FFC/FPC (1-20) |       |
| CN7002       | QGF0532F2-20X | CONNECTOR    | LCD FFC/FPC (1-20)  |       |

### SD BOARD ASSEMBLY <07>

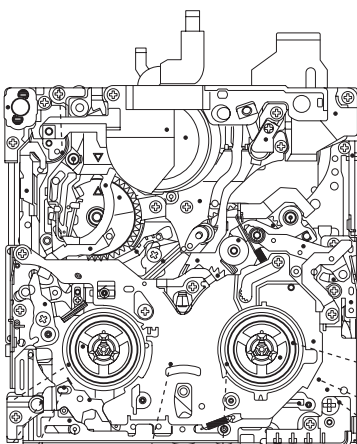
| △ Symbol No. | Part No.      | Part Name      | Description             | Local |
|--------------|---------------|----------------|-------------------------|-------|
| PW1          | YB10463A-01   | SD BOARD ASSY  |                         |       |
| D8501        | EMZ6.8N-X     | Z DIODE        |                         |       |
| C8501        | NBZ0015-106X  | TA E CAPACITOR | 10uF 6.3V M             |       |
| C8502        | NCBA1AK-104W  | C CAPACITOR    | 0.1uF 10V K             |       |
| R8501        | NRSA6AJ-103W  | MG RESISTOR    | 10kΩ 1/16W J            |       |
| R8502        | NRSA6AJ-103W  | MG RESISTOR    | 10kΩ 1/16W J            |       |
| R8503        | NRSA6AJ-103W  | MG RESISTOR    | 10kΩ 1/16W J            |       |
| R8504        | NRSA6AJ-103W  | MG RESISTOR    | 10kΩ 1/16W J            |       |
| R8505        | NRSA6AJ-103W  | MG RESISTOR    | 10kΩ 1/16W J            |       |
| R8506        | NRSA6AJ-103W  | MG RESISTOR    | 10kΩ 1/16W J            |       |
| R8507        | NRSA6AJ-0R0W  | MG RESISTOR    | 0Ω 1/16W J              |       |
| L8501        | NQR0006-001X  | FERRITE BEADS  |                         |       |
| CN701        | QGF0532F2-12X | CONNECTOR      | MAIN PWB FFC/FPC (1-12) |       |
| CN702        | NNZ0104-001X  | SD CARD CONNE  | SD CN                   |       |
| S701         | NSW0099-001X  | SLIDE SWITCH   | DSC/VIDEO               |       |
| OT1          | LY30034-026B  | SPACER(A)      | SD CN                   |       |
| OT2          | LY30034-068A  | SPACER(A)      | DSC/VIDEO               |       |

# JVC

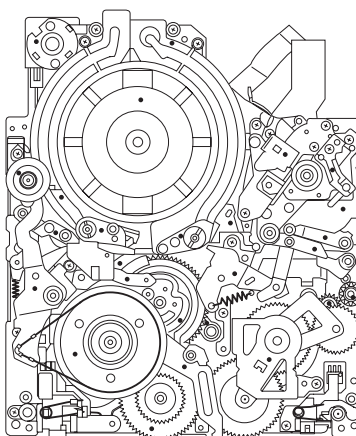
## SERVICE MANUAL

MECHANISM ASSEMBLY

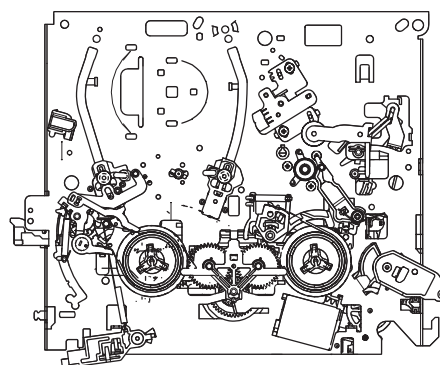
### DVC MECHANISM VHS-C MECHANISM VHS MECHANISM



<DVC MECHANISM>



<VHS-C MECHANISM>



<VHS MECHANISM>

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# SECTION 1

## JIGS AND TOOLS

### 1.1 TOOLS REQUIRED FOR ADJUSTMENTS

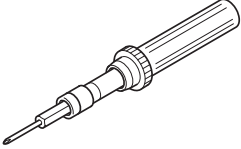
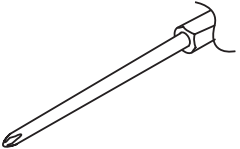
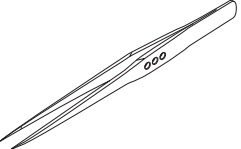
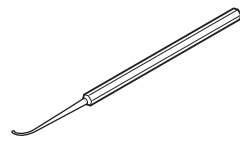
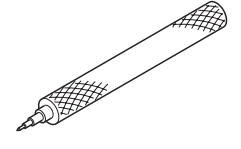
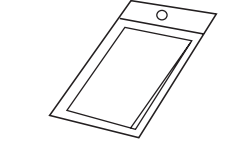
|                                                                                   |                                                                                   |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| 1. Torque driver<br>YTU94088                                                      | 2. Bit<br>YTU94088-003                                                            |
|  |  |
| 3. Tweezers<br>P-895                                                              | 4. Chip IC replacement jig<br>PTS40844-2                                          |
|  |  |
| 5. Slit washer installation jig<br>YTU94121A                                      | 6. Cleaning cloth<br>KSMM-01                                                      |
|  |  |

Fig.1-1-1

#### 1. Torque driver

Be sure to use to fastening the mechanism and exterior parts because those parts must strictly be controlled for tightening torque.

Torque setting value of torque driver is limited. At the values over the maximum torque setting value, fasten a screw manually not to damage the screw thread.

#### 2. Bit

This bit is slightly longer than those set in conventional torque drivers.

#### 3. Tweezers

To be used for removing and installing parts and wires.

#### 4. Chip IC replacement jig

To be used for replacement of part.

#### 5. Slit washer installation jig

To be used to install slit washers.

#### 6. Cleaning cloth

Recommended cleaning cloth to wipe down the video heads, mechanism (tape transport system), optical lens surface.

## SECTION 2

### SPECIFIC SERVICE INSTRUCTIONS

#### 2.1 DVC MECHANISM

##### 2.1.1 Precautions

- (1) When fastening parts, pay careful attention to the tightening torque of each screw. Unless otherwise specified, tighten a screw with the torque of 0.055 N•m (0.56 kgf•cm).
- (2) Be sure to disconnect the set from the power supply before fastening and soldering parts.
- (3) When disconnecting/connecting wires, be careful not to get them and their connectors damaged.
- (4) When replacing parts, be very careful neither to damage other parts nor to fit wrong parts by mistake.

##### 2.1.2 Notes on procedure for disassembly/assembly

The disassembling procedure table (Fig. 2-1-10 on page 2-4, a part of the table is shown below for reference) shows the procedure to disassemble/reassemble mechanism parts.

Carefully read the following explanation before starting actual disassembling/reassembling work. The item numbers (circled numbers) in the following explanation correspond to those appearing under respective columns of the table.

##### Example

| NO.   | PART NAME             | FIG. | POINT     | NOTE              | REMARKS        |
|-------|-----------------------|------|-----------|-------------------|----------------|
| [ 1 ] | CASSETTE HOUSING ASSY | T    | Fig.2-4-3 | 3(S1),(L1a)-(L1e) | NOTE 1 a,b,c,d |
| [ 2 ] | UPPER BASE ASSY       | T    | Fig.2-4-4 | (S2),(L2a),(L2b)  | NOTE 2         |
| [ 3 ] | DRUM ASSY             | T    |           | (S3a),2(S3b)      | NOTE 3 a,b     |
| [ 4 ] | REEL DISK ASSY(SUP)   | T    | Fig.2-4-5 | (W4)              | NOTE 4 a       |
| [ 5 ] | REEL DISK ASSY(TU)    | T    |           | (W5a),(W5b),(W5c) | NOTE 5 a,b     |
| [ 6 ] | REEL COVER ASSY       | T    |           | (W6),(S6a),2(S6b) | NOTE 6         |

↑  
\*1

↑  
\*2

↑  
\*3

↑  
\*4

↑  
\*5

↑  
\*6

↑  
\*7

\*1 Numbers appearing in this column indicate the order to remove parts. When reassembling, follow these numbers in the reverse order. Circled numbers in this column correspond to those appearing in drawings of this section.

\*2 This column shows part names corresponding to numbers in the left column.

\*3 The symbol (T or B) appearing in this column shows the side which the objective part is mounted on.

T =the upper side, B =the lower side

\*4 Symbols appearing in this column indicate drawing numbers.

\*5 This column indicates parts and points such as screws, washers, springs, and others to be removed/fitted for disassembling/reassembling the mechanism. Besides such the parts, this column occasionally indicates working points.

P = Spring

W = Washer

S = Screw

\* = Lock (L), soldering (SD), shield, connector (CN), etc.

\*6 Numbers in this column represent the numbers of notes in the text.

(For parts that need phase adjustment after reassembling, refer to "MECHANISM ADJUSTMENTS".)

\*7 This column indicates required after-disassembling/-reassembling work such as phase adjustment or mechanism adjustment.

##### Example

- Remove (W1)=Washer W1.
- Remove the solder at (SD1)=Point SD1.
- Disconnect A = Connector A.

## 2.1.3 DISASSEMBLY AND ASSEMBLY OF MECHANISM ASSEMBLY

### 2.1.3.1 General statement

The mechanism should generally be disassembled/assembled in the C.IN mode (ASSEMBLY mode). (Refer to Fig. 2-1-1,2-1-2.) However, when the mechanism is removed from the main body, it is set in the STOP mode. Therefore, after the mechanism is removed from the main body, supply 3 V DC to the electrode on the top of the loading motor to enter the mechanism mode into the C IN mode compulsory.

#### <Mechanism assembly/Cassette housing assembly>

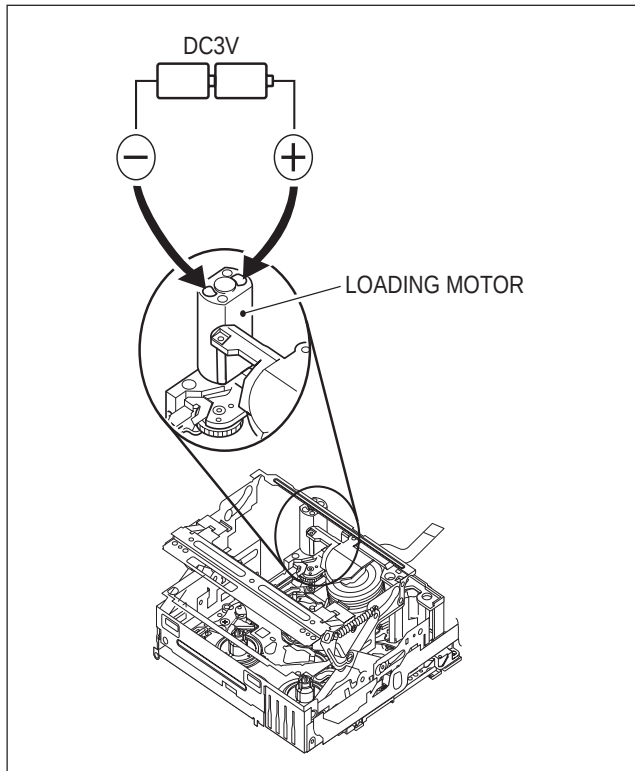


Fig.2-1-1

#### <Back side of the mechanism assembly>

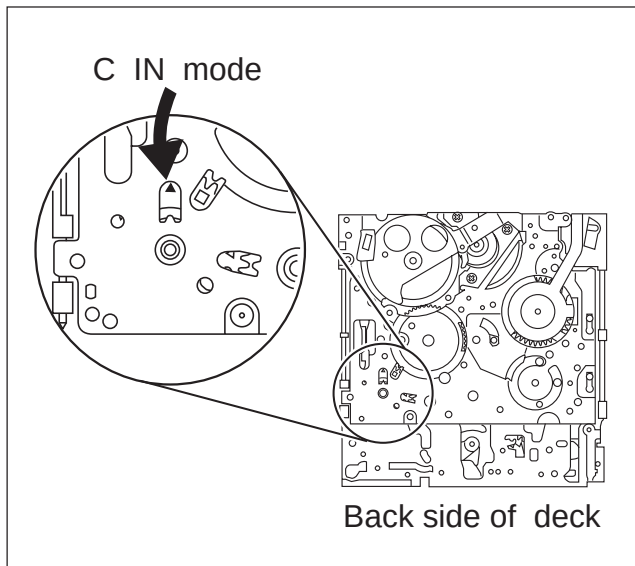


Fig.2-1-2

### 2.1.3.2 Explanation of mechanism mode

The mechanism mode of this model is classified into five modes as shown in Fig. 2-1-9. Each mechanism mode can be distinguished from others by the relative position of "△", "○", "○", "□" marks on the sub cam gear to the inner or outer protrusion on the main deck.

Refer to Fig. 2-1-3 to 2-1-8 below.

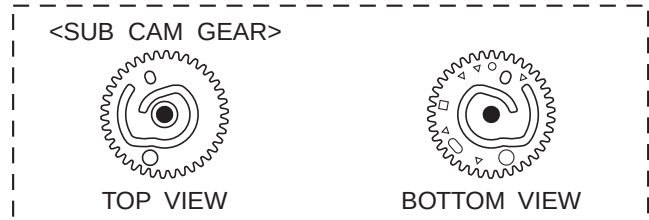


Fig.2-1-3

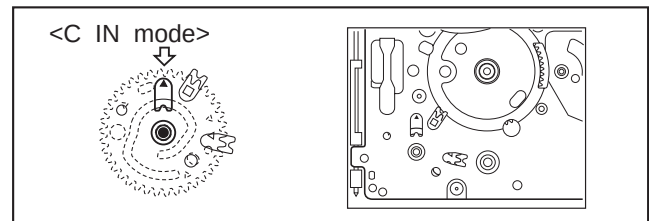


Fig.2-1-4

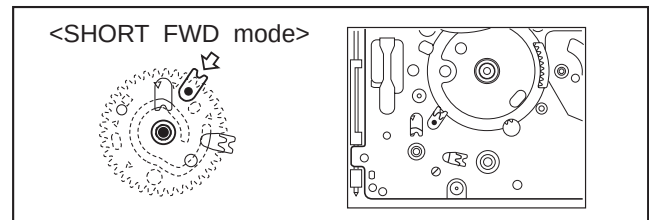


Fig.2-1-5

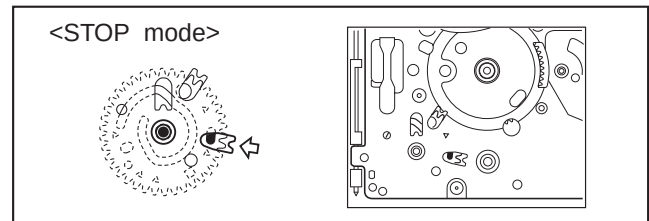


Fig.2-1-6

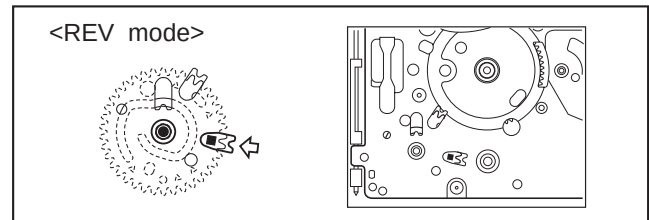


Fig.2-1-7

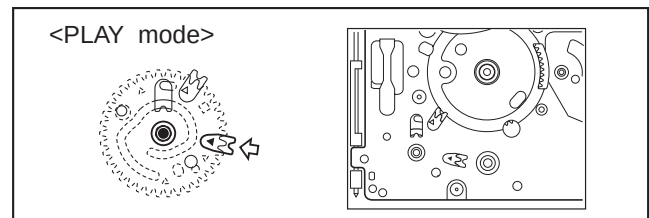


Fig.2-1-8

### 2.1.3.3 Mechanism timing chart

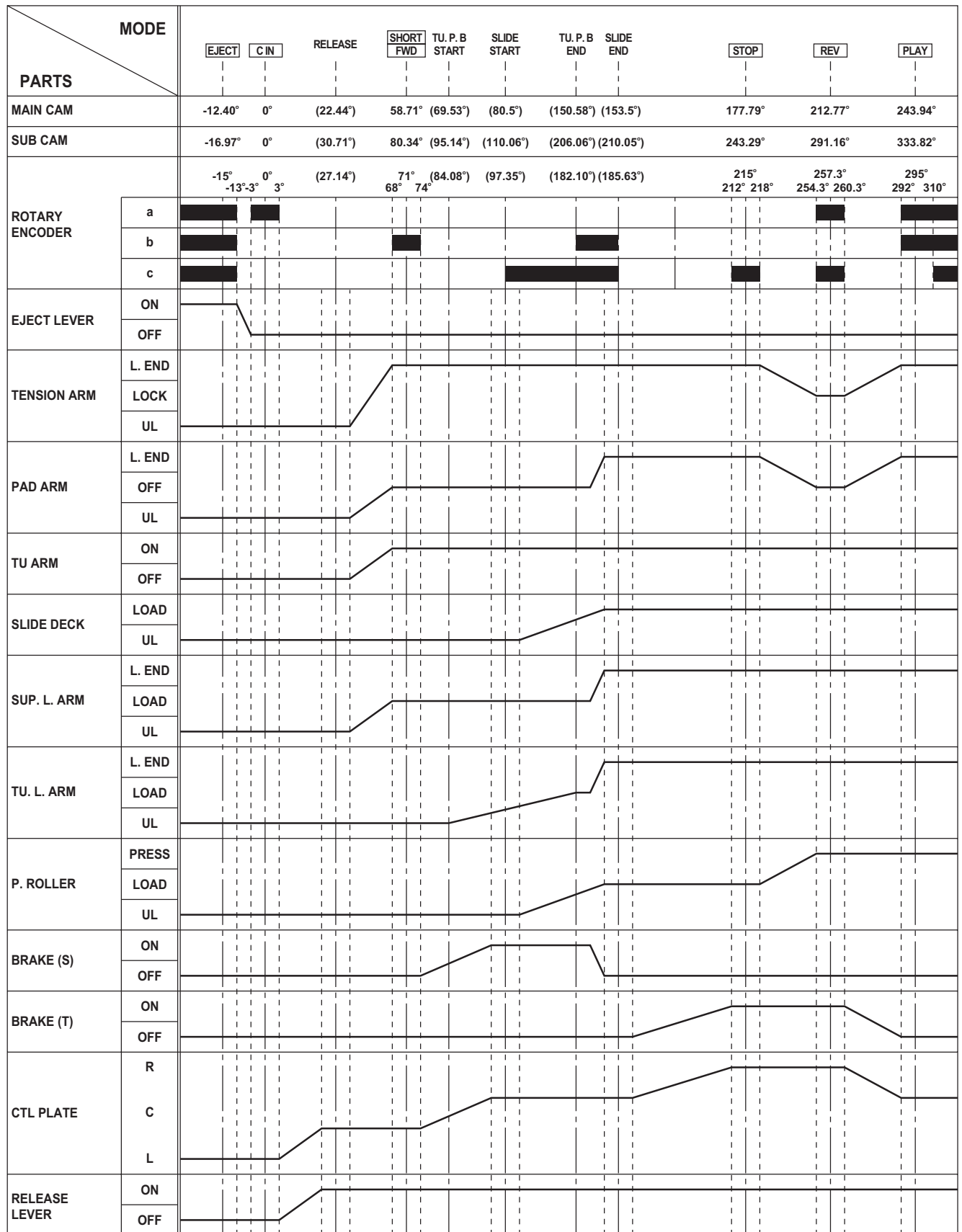


Fig.2-1-9

## 2.1.4 DISASSEMBLY PROCEDURE TABLE

MARK: # After assembly, perform adjustments.

| NO.         | PART NAME                        |   | FIG.       | POINT                                     | NOTE           | REMARKS          |
|-------------|----------------------------------|---|------------|-------------------------------------------|----------------|------------------|
| [ 1 ]       | CASSETTE HOUSING ASSY            | T | Fig.2-1-14 | 3(S1),(L1a)-(L1e)                         | NOTE 1 a,b,c,d | ADJUSTMENT       |
| [ 2 ]       | UPPER BASE ASSY                  | T | Fig.2-1-15 | (S2),(L2a),(L2b)                          | NOTE 2         |                  |
| [ 3 ]       | DRUM ASSY                        | T |            | (S3a),2(S3b)                              | NOTE 3 a,b     | ADJUSTMENT       |
| [ 4 ]       | REEL DISK ASSY(SUP)              | T | Fig.2-1-16 | (W4)                                      | NOTE 4         |                  |
| [ 5 ]       | REEL DISK ASSY(TU)               | T |            | (W5a),(W5b)                               | NOTE 5 a,b     |                  |
| [ 6 ]       | REEL COVER ASSY                  | T |            | (W6),2(S6a),(S6b)                         | NOTE 6         |                  |
| [ 7 ]       | TENSION ARM ASSY                 | T | Fig.2-1-17 | (L7)                                      | NOTE 7         | ADJUSTMENT / #   |
| [ 8 ]       | SLANT POLE ARM ASSY              | T |            | (P8)                                      | NOTE 8         | ADJUSTMENT       |
| [ 9 ]       | TU ARM ASSY                      | T |            | (L9)                                      | NOTE 9         | ADJUSTMENT       |
| [10]        | SWING ARM ASSY                   | T |            | (S10)                                     | NOTE 10        | ADJUSTMENT       |
| [11]        | SLIDE DECK ASSY                  | T | Fig.2-1-18 | 2(S11a),(S11b),2(L11a),<br>2(L11b),(L11c) | NOTE 11a,b     | ADJUSTMENT / #   |
| [12]        | PAD ARM ASSY                     | T | Fig.2-1-19 | (P12),(L12),(W12)                         | NOTE 12        | ADJUSTMENT / #   |
| [13]        | -                                | - |            | -                                         | -              |                  |
| [14]        | TU BRAKE ASSY                    | T |            | (P14),(L14),(W14)                         | NOTE 14        | ADJUSTMENT       |
| [15]        | TENSION CTL LEVER ASSY           | T | Fig.2-1-20 | (W15)                                     | NOTE 15        | ADJUSTMENT       |
| [16]        | CENTER GEAR                      | T |            | -                                         | NOTE 16        |                  |
| [17]        | PINCH ROLLER ARM F. ASSY         | T |            | (W17)                                     | NOTE 17        | ADJUSTMENT       |
| [18]        | TENSION CTL PLATE ASSY           | T |            | -                                         | NOTE 18        | ADJUSTMENT       |
| [19]        | BRAKE CTL LEVER ASSY             | T |            | -                                         | NOTE 19        | ADJUSTMENT       |
| [20]        | MOTOR BRACKET ASSY               | T | Fig.2-1-21 | 3(S20),(L20a),2(L20b)                     | NOTE 20        | ADJUSTMENT       |
| [21]        | GUIDE RAIL ASSY                  | T |            | 2(W21),(S21),2(L21a),(L21b)               | NOTE 21        | ADJUSTMENT       |
| [22]        | SLIDE LEVER 2 ASSY               | T |            | -                                         | NOTE 22        | ADJUSTMENT / #   |
| [23]        | LOADING PLATE ASSY               | T |            | (W23)                                     | NOTE 23        | ADJUSTMENT       |
| [24]        | MODE GEAR                        | T |            | -                                         | NOTE 24        |                  |
| [25]        | EJECT LEVER                      | T |            | (W25)                                     | NOTE 25        | ADJUSTMENT       |
| [26]        | BASE R ASSY                      | T | Fig.2-1-22 | (S26a),(S26b),2(L26)                      | NOTE 26        | ADJUSTMENT       |
| [27]        | ROTARY ENCODER                   | T |            | 2(S27)                                    | NOTE 27        | PHASE ADJUSTMENT |
| [28]        | GEAR COVER ASSY                  | T |            | (S28a),2(S28b)                            | -              |                  |
| [29]        | MAIN CAM ASSY                    | T |            | -                                         | NOTE 29        | PHASE ADJUSTMENT |
| [30]        | SLIDE ARM ASSY                   | T | Fig.2-1-23 | -                                         | NOTE 30        | ADJUSTMENT       |
| [31]        | CONNECT GEAR 2                   | T |            | -                                         | NOTE 31        |                  |
| [32]        | SUB CAM ASSY                     | T |            | (S32)                                     | NOTE 32        | PHASE ADJUSTMENT |
| [33]        | CONTROL ARM ASSY                 | T |            | -                                         | NOTE 33        | ADJUSTMENT       |
| [34]        | REEL GEAR 1                      | T |            | -                                         | NOTE 34        |                  |
| [35] / [36] | DRUM BASE ASSY/<br>CAPSTAN MOTOR | T | Fig.2-1-24 | 3(S35)                                    | NOTE 35a,b     | ADJUSTMENT       |
| [36]        | CAPSTAN MOTOR                    | T |            | (S36)                                     | NOTE 36        | ADJUSTMENT       |
| [37]        | MAIN DECK ASSY                   | T |            | -                                         | -              |                  |

Fig.2-1-10

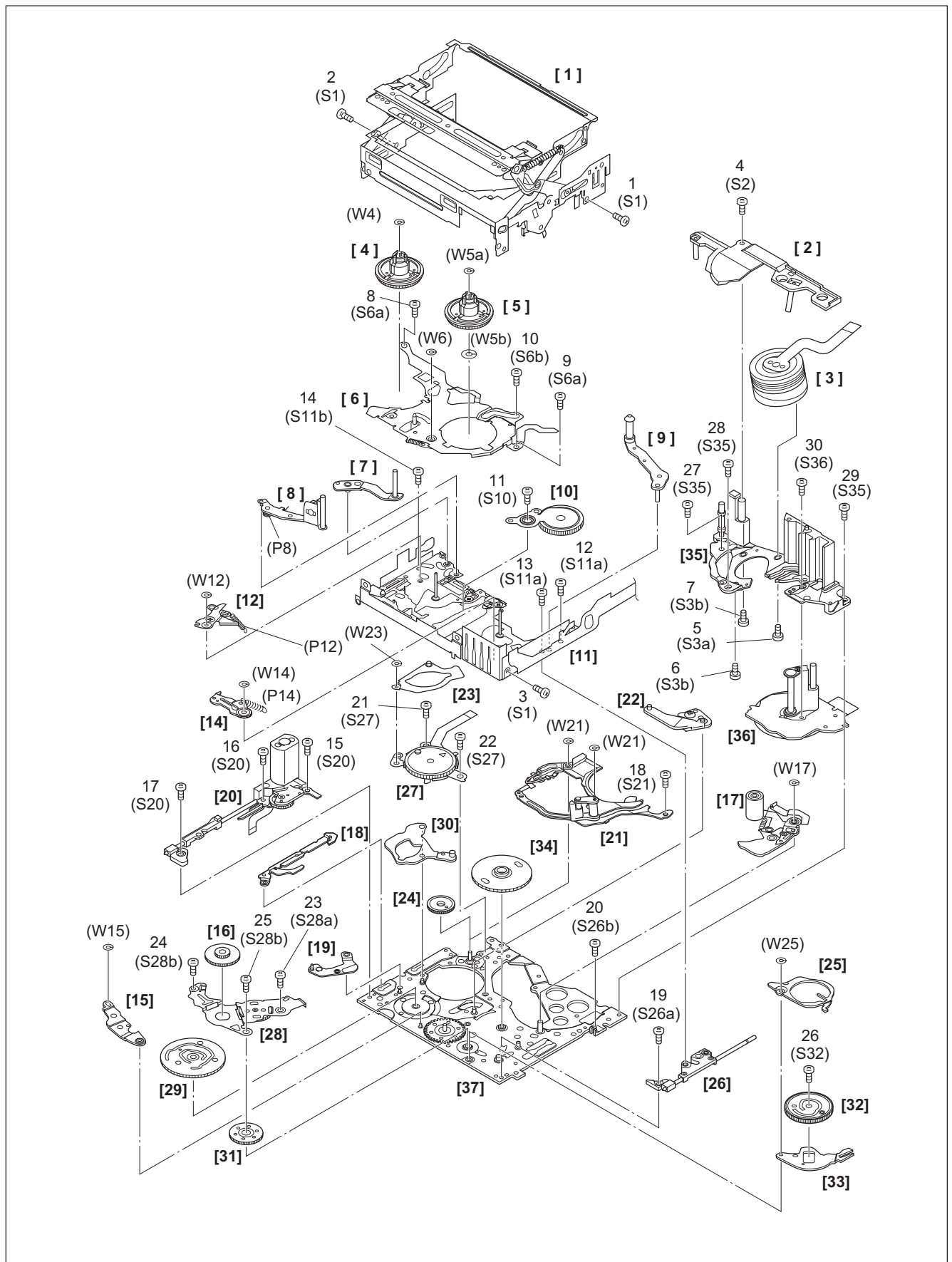


Fig.2-1-11

< TOP VIEW >

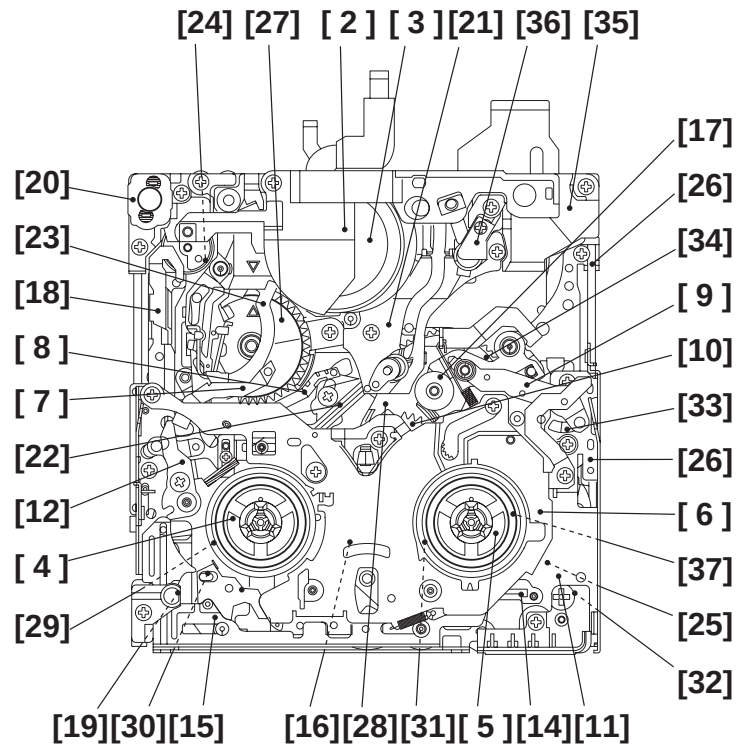


Fig.2-1-12

< BOTTOM VIEW >

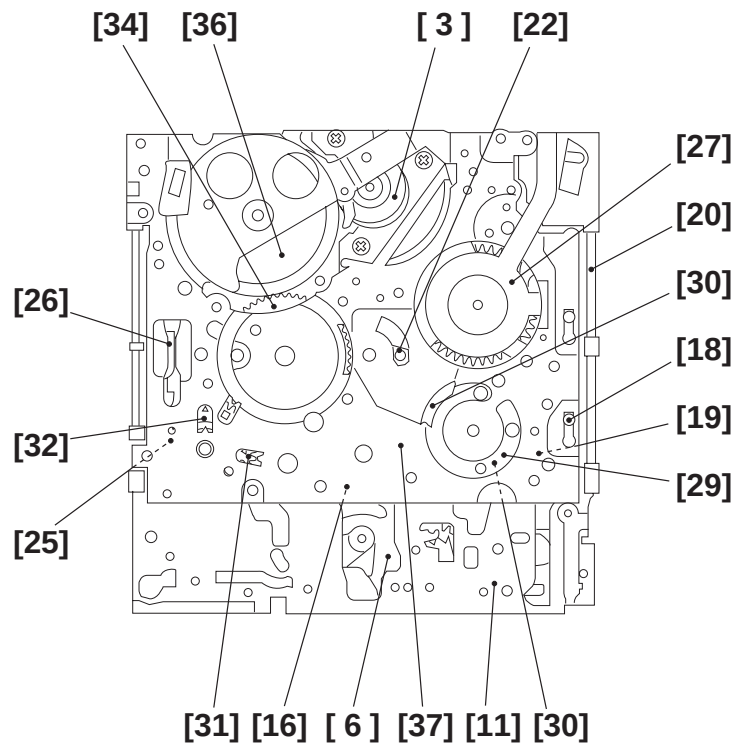


Fig.2-1-13

## 2.1.5 DISASSEMBLY/ASSEMBLY

### 2.1.5.1 [ 1 ] CASSETTE HOUSING ASSY

#### NOTE 1a:

Be careful not to damage any of the parts during work.

#### NOTE 1b:

Special care is required in mounting.

#### NOTE 1c:

When mounting, the CASSETTE HOUSING ASSY should be attached in the Eject status. Pay heed to the positions of the LOCK LEVER and EJECT LEVER during mounting.

#### NOTE 1d:

When mounting, be sure to locate the FPC in the gap.

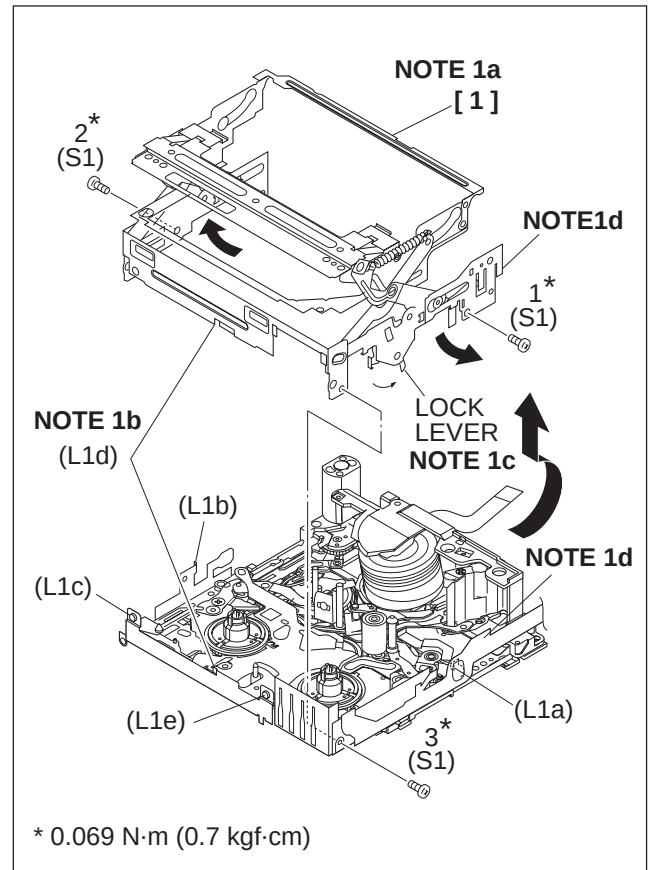
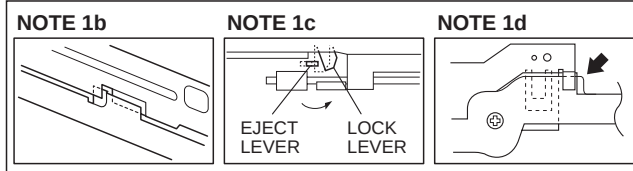


Fig.2-1-14

### 2.1.5.2 [ 2 ] UPPER BASE ASSY

### [ 3 ] DRUM ASSY

#### NOTE 2:

When mounting, be sure to insert the FPC reinforcing sheet.

#### NOTE 3a:

Be mindful of scratches or damage during work.

#### NOTE 3b:

Be careful not to attach screws incorrectly.

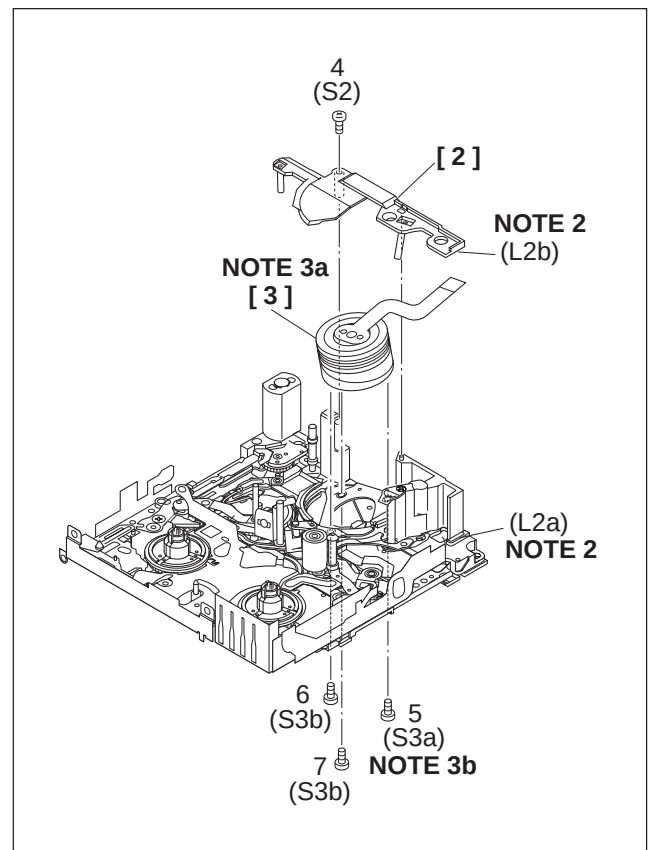
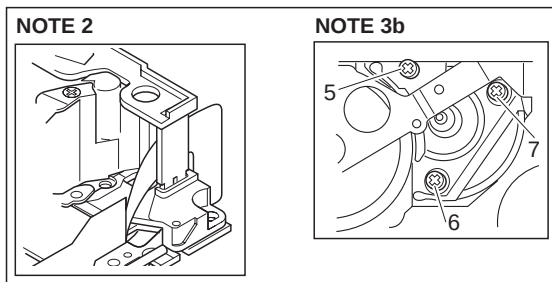


Fig.2-1-15

**2.1.5.3 [ 4 ] REEL DISK ASSY(SUP)**  
**[ 5 ] REEL DISK ASSY(TU)**  
**[ 6 ] REEL COVER ASSY**

**NOTE 4:**

Be careful not to attach the REEL DISK wrongly. The Supply side can be identified by the white color at the center.

**NOTE 5a:**

Be careful not to attach the REEL DISK wrongly. The Take-up side can be identified by the black color at the center.

**NOTE 5b**

The washer is inserted under the REEL DISK.

Be careful not to lose the washer.

Two washers are inserted under the REEL DISK in some products manufactured earlier, but one washer is inserted in the products manufactured recently and in the future.

See the parts list, and use the parts written in the parts list.

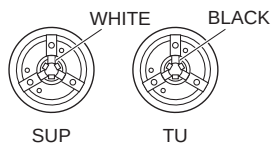
**NOTE 6:**

Perform the following steps for mounting.

- (1) Align the hole with the pin.
- (2) Attach the [17] PINCH ROLLER ARM FINAL ASSY by aligning the positions.
- (3) Attach the SLIDE DECK ASSY (POINT[A]) by aligning the positions.
- (4) Check that the parts below them are located in the correct positions.
- (5) Tighten the 2 screws.
- (6) Tighten the screw.
- (7) Attach the 1 SLIT WASHER parts.

**NOTE 4, 5**

**REEL DISK ASSY**



**NOTE 6**

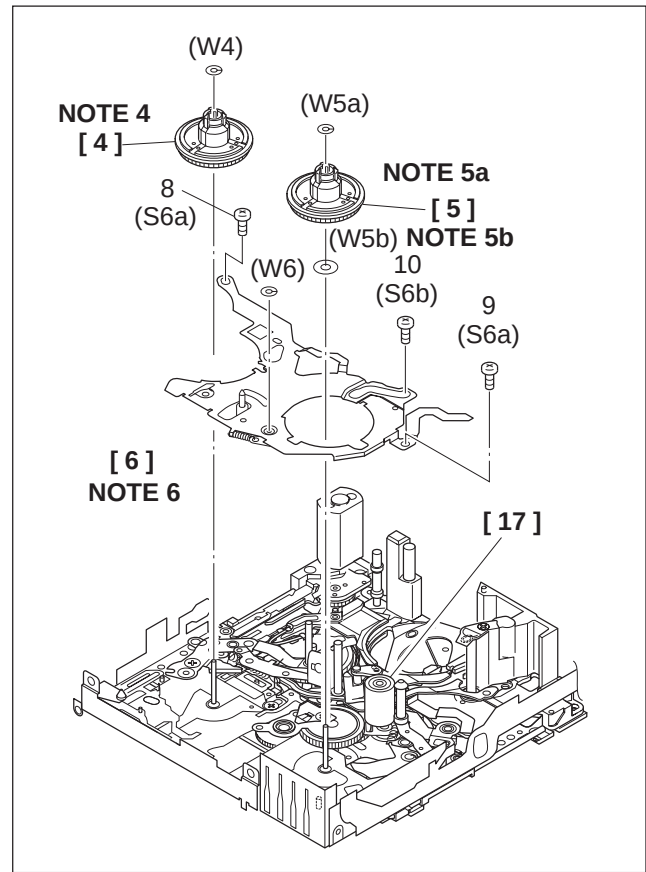
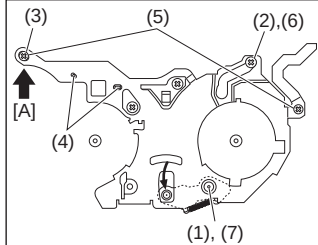


Fig.2-1-16

2.1.5.4 [ 7 ] TENSION ARM ASSY  
 [ 8 ] SLANT POLE ARM ASSY  
 [ 9 ] TU ARM ASSY  
 [10] SWING ARM ASSY

**NOTE 7:**

When detaching, remove the spring of the [12] PAD ARM ASSY in advance.

Pay attention to the attachment position.

**NOTE 8:**

When mounting the SLANT POLE ARM ASSY, hook the spring onto the lug as in diagram A, and fit the combination onto the SLIDE DECK ASSY. After fitting, hook the spring onto the lug of the SLIDE DECK ASSY as in diagram B.

Be careful not to lose the spring.

**NOTE 9:**

Pay attention to the attachment position.

**NOTE 10:**

When detaching, remove the screw then remove the SWING ARM ASSY by pulling it up and turning it.

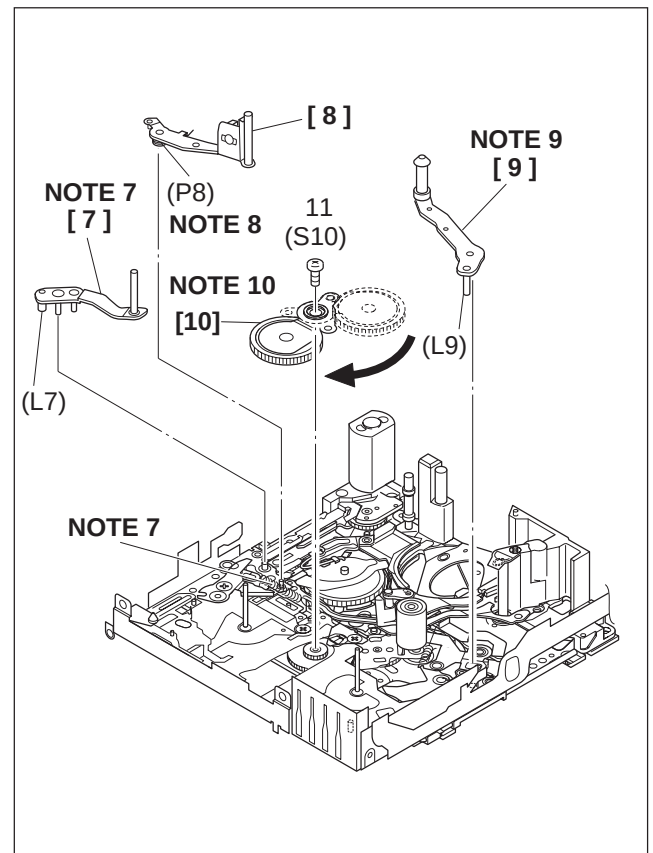
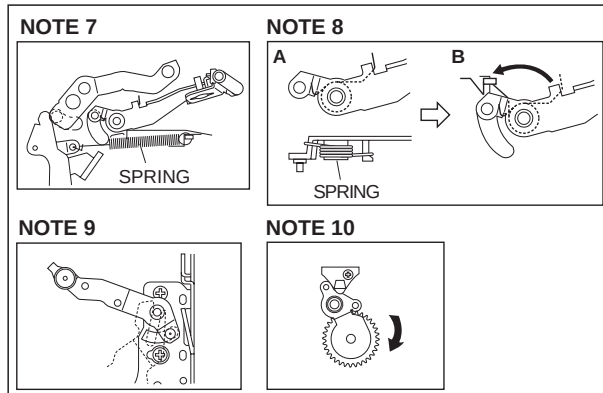


Fig.2-1-17

### 2.1.5.5 [11] SLIDE DECK ASSY

#### NOTE 11a:

Each of the parts on the SLIDE DECK ASSY can be replaced separately.

When detaching the assembly, if there is no need to replace any of its parts, remove the SLIDE DECK ASSY as it is.

#### NOTE 11b:

When mounting, pay attention to the positions of the [22] SLIDE LEVER 2 ASSY studs and the [19] BRAKE CTL LEVER ASSY.

When mounting, position the CONTROL PLATE on the left side.

Pay attention to the position of the SLIDE GUIDE PLATE during mounting.

#### NOTE 11b

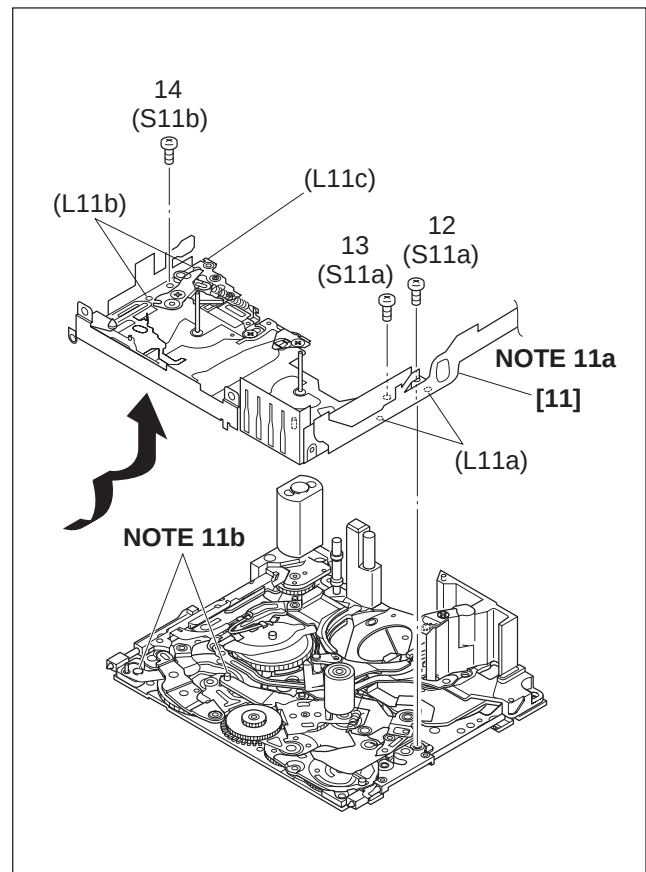
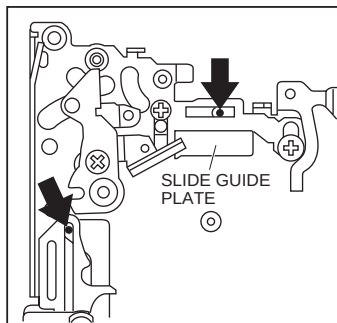


Fig.2-1-18

### 2.1.5.6 [12] PAD ARM ASSY

#### [13] -

#### [14] TU BRAKE ASSY

#### NOTE 12:

The spring may have already been disengaged when the [ 8 ] SLANT POLE ARM ASSY was removed.

#### NOTES 14:

When mounting, pay attention to the correct positioning. Mount the CONTROL PLATE by moving it fully toward the left side.

#### NOTE 12,14

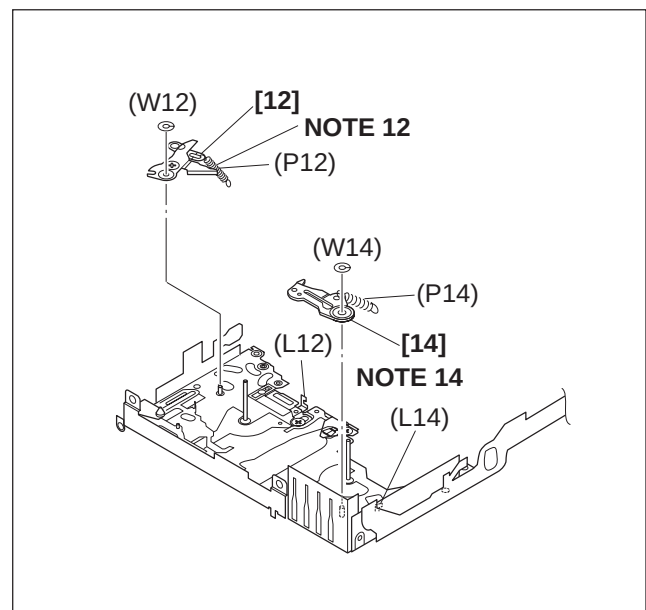
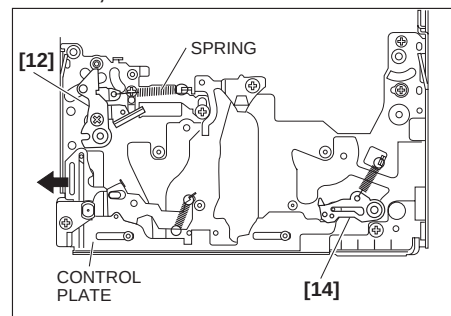


Fig.2-1-19

- 2.1.5.7 [15] TENSION CTL LEVER ASSY  
 [16] CENTER GEAR  
 [17] PINCH ROLLER ARM FINAL ASSY  
 [18] TENSION CTL PLATE ASSY  
 [19] BRAKE CTL LEVER ASSY

**NOTES 15/16:**

When mounting, pay attention to the correct positioning.

**NOTE 17:**

Take care against grease attachment during work.

**NOTES 18/19:**

When mounting, pay attention to the correct positioning.

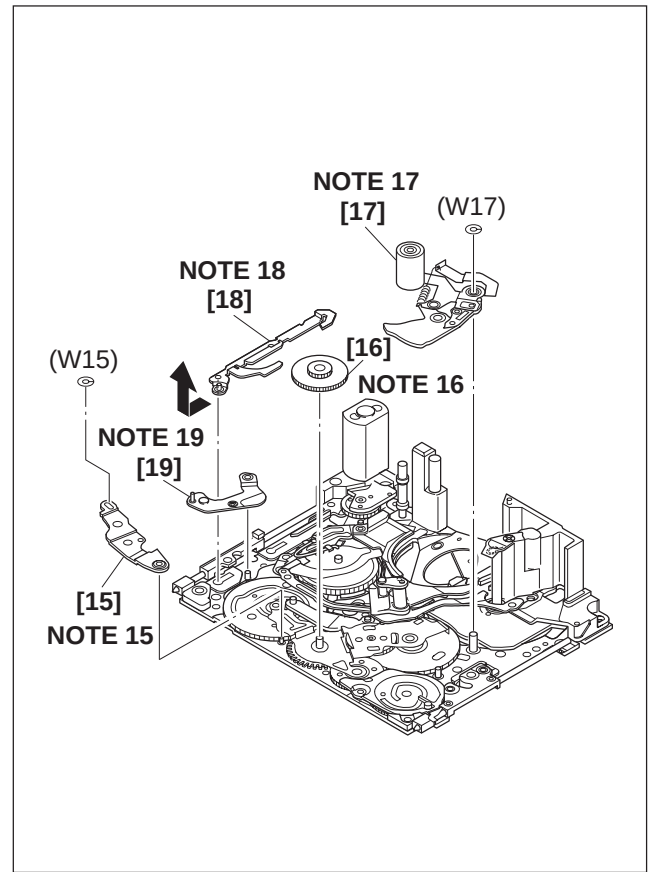
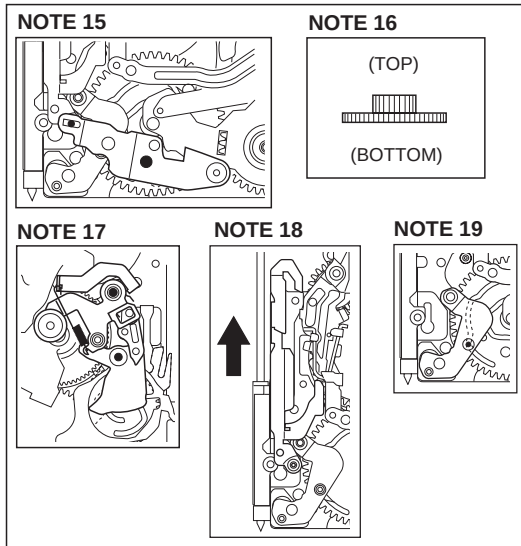


Fig.2-1-20

- 2.1.5.8 [20] MOTOR BRACKET ASSY  
 [21] GUIDE RAIL ASSY  
 [22] SLIDE LEVER 2 ASSY  
 [23] LOADING PLATE ASSY  
 [24] MODE GEAR  
 [25] EJECT LEVER

**NOTE 20:**

When mounting, pay attention to the positioning of the sliding parts.

**NOTE 21:**

When mounting, take care that no part is allowed to float or rattle.

**NOTES 22/23/24/25:**

When mounting, pay attention to the correct positioning.

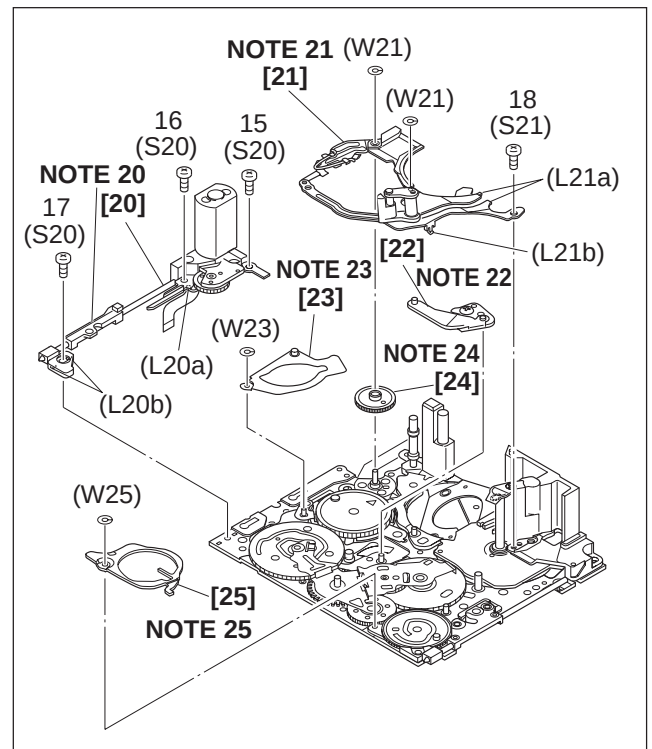
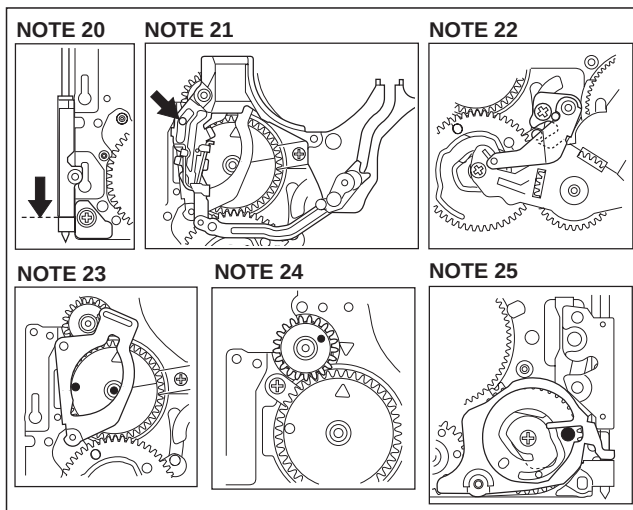


Fig.2-1-21

2.1.5.9 [26] BASE R ASSY  
[27] ROTARY ENCODER  
[28] GEAR COVER ASSY  
[29] MAIN CAM ASSY

**NOTE 26:**

When mounting, fold the sliding part to the inner side.

**NOTE 27:**

When mounting, pay attention to the correct positioning and the FPC layout.

**NOTE 29:**

When mounting, pay attention to the correct positioning.

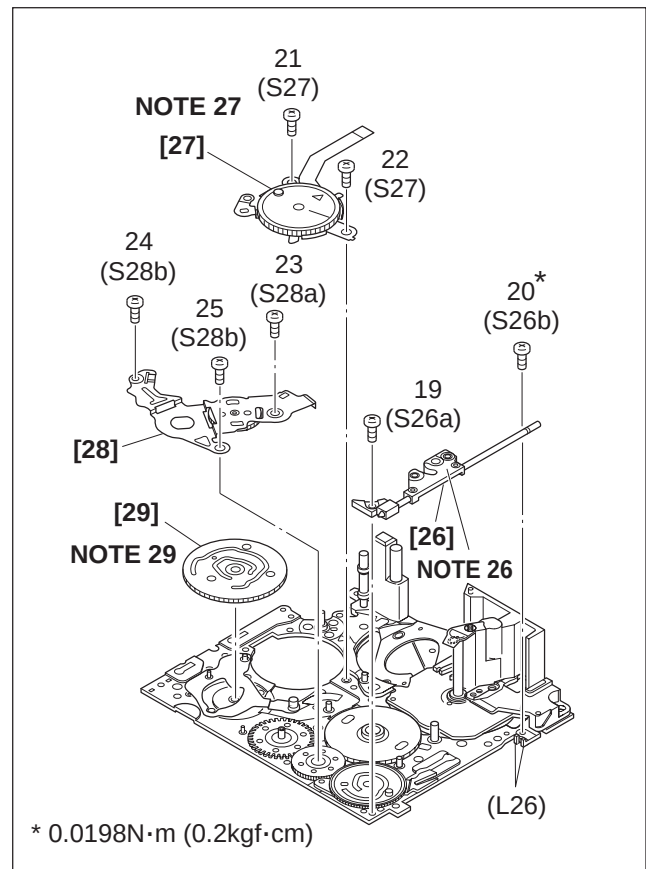
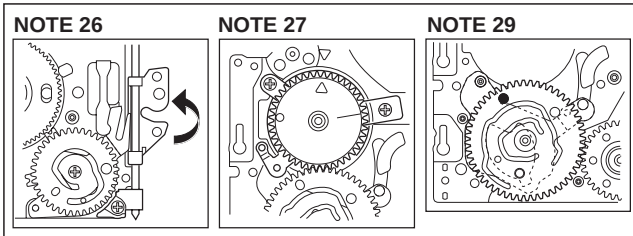


Fig.2-1-22

2.1.5.10 [30] SLIDE ARM ASSY  
[31] CONNECT GEAR 2  
[32] SUB CAM ASSY  
[33] CONTROL ARM ASSY  
[34] REEL GEAR 1

**NOTE 30:**

When mounting, pay attention to the correct positioning.

**NOTE 31:**

When mounting, pay attention to the position of the front and back.

**NOTES 32/33/34:**

When mounting, pay attention to the correct positioning.

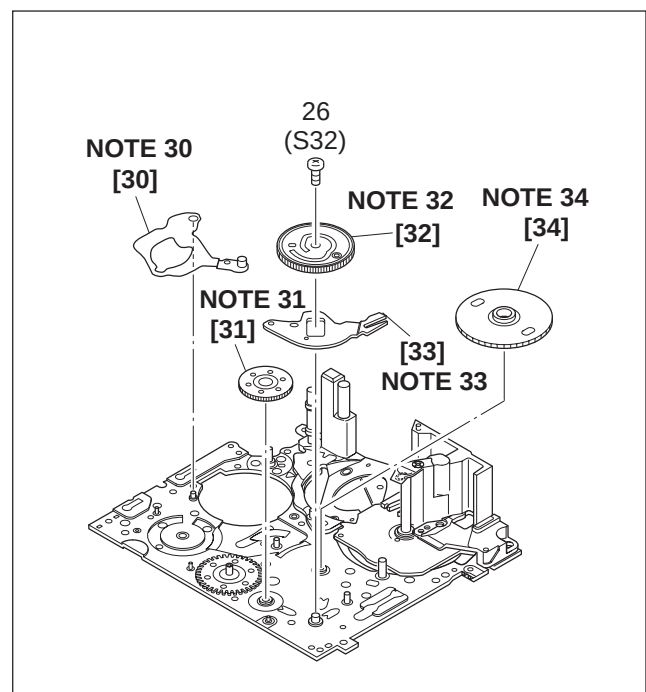
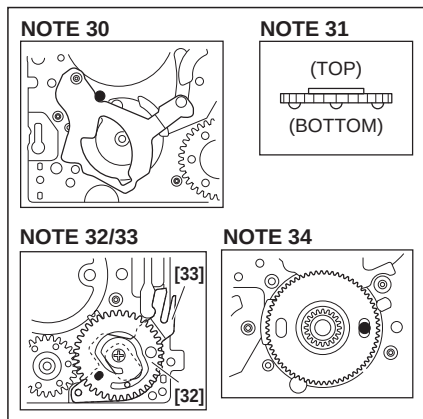


Fig.2-1-23

**2.1.5.11 [35] DRUM BASE ASSY  
[36] CAPSTAN MOTOR  
[37] MAIN DECK ASSY**

**NOTES 35a/36:**

Since [36]CAPSTAN MOTOR is attached to [35]DRUM BASE ASSY, remove [36]CAPSTAN MOTOR together with [35]DRUM BASE ASSY when removing [36]CAPSTAN MOTOR.

[36]CAPSTAN MOTOR should not be separated from [35]DRUM BASE ASSY except when replacing them.

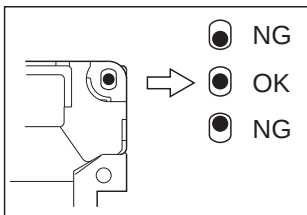
**NOTE 35b:**

It is very important to attach [35]DRUM BASE ASSY to the proper position.

Especially, improper engagement of [36]CAPSTAN MOTOR with [34]REEL GEAR 1 causes operational deflection or abnormal sound. Therefore, confirm the attachment position before disassembly procedure.

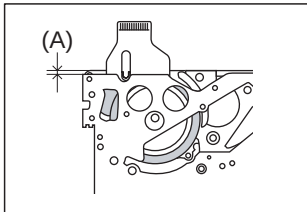
See the following figure as for the proper attachment position.

**NOTE 35b**



When [35]DRUM BASE ASSY is properly attached, the screw hole tends to be located at the center of the oval.

When the screw hole is located far from the center of the oval, operational deflection or abnormal sound may occur.



Before removing [35]DRUM BASE ASSY, confirm the position of [35]DRUM BASE ASSY by seeing the length (A), as shown in the left figure.

When reattaching [35]DRUM BASE ASSY, confirm the position to reattach [35]DRUM BASE ASSY by seeing the length (A). Be sure to reattach [35]DRUM BASE ASSY to the same position as it has been before the removing procedure.

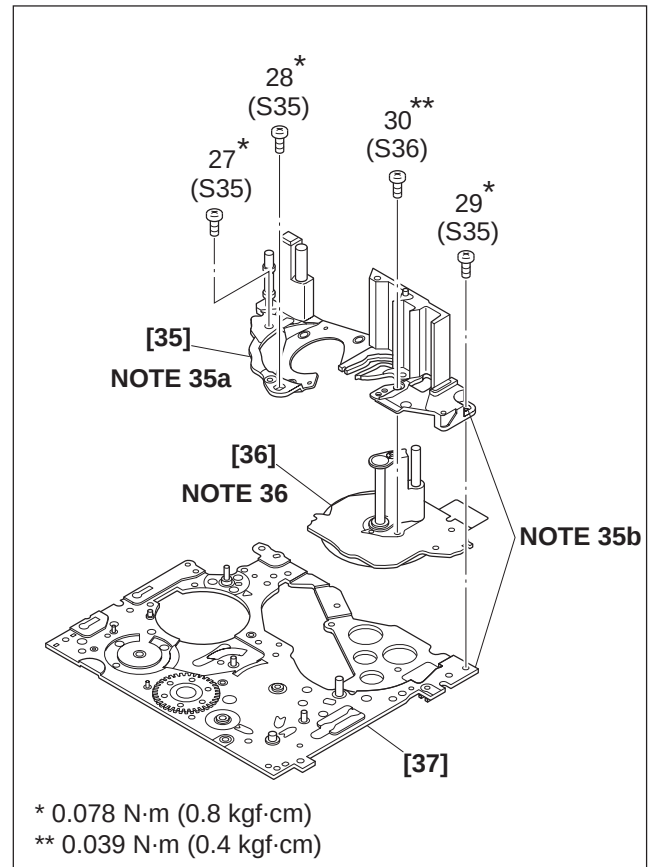


Fig.2-1-24

## 2.1.6 CHECKUP AND ADJUSTMENT OF MECHANISM PHASE

### [24]MODE GEAR

Align the MODE GEAR with the Main Deck Assembly hole.

**Note:**

The MODE GEAR may be displaced during the mechanism operation, however it can be checked from the rear and realigned during manual assembly.

### [27]ROTARY ENCODER

Mount the ROTARY ENCODER by aligning its mark ( $\Delta$ ) and the mark ( $\nabla$ ) of the Main Deck Assembly.

**Note:**

Be careful when handling the FPC during mounting.

### [34]REEL GEAR 1

Align the REEL GEAR 1 with the Main Deck Assembly hole.

**Note:**

The REEL GEAR 1 may be displaced during mechanism operation, however this can be checked from the rear and realigned during manual assembly.

### [29]MAIN CAM ASSY/[30]SLIDE ARM ASSY

When mounting the SLIDE ARM ASSY align it with the Main Deck Assembly and MAIN CAM ASSY holes.

**Note:**

During the mounting procedure, make sure that the [32] SUB CAM ASSY is in the correct mounting position.

### [32]SUB CAM ASSY/[33] CONTROL ARM ASSY

Mount the SUB CAM ASSY hole to align with the CONTROL ARM ASSY and Main Deck Assembly holes and then tighten them all together with a screw.

**Note:**

When mounting it, make sure that the [29]MAIN CAM ASSY is in the correct mounting position.

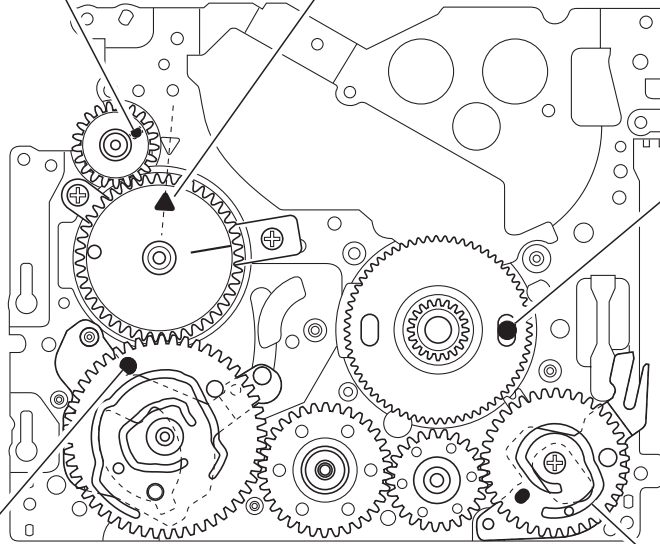


Fig.2-1-25

## 2.1.7 MECHANISM ADJUSTMENTS

### 2.1.7.1 Adjustment of the slide guide plate

Use Fig. 2-1-26 as the reference unless otherwise specified.

- (1) Set the PLAY mode. See Fig. 2-1-8.
- (2) Loosen the screws (A, B).
- (3) With the Main Deck and Slide Deck Assemblies pushed into the unit, tighten the screws (A, B) while applying pressure to the stud (shaft) on the Slide Guide plate.  
The pressure applied should be enough to enable utilization of the rebounding force of the springs.  
The tightening torque should be 0.069 N•m (0.7 kgf•cm).
- (4) Check the operation.  
Repeat unloading and loading several times and make sure that these operations can be performed smoothly without producing rattles.

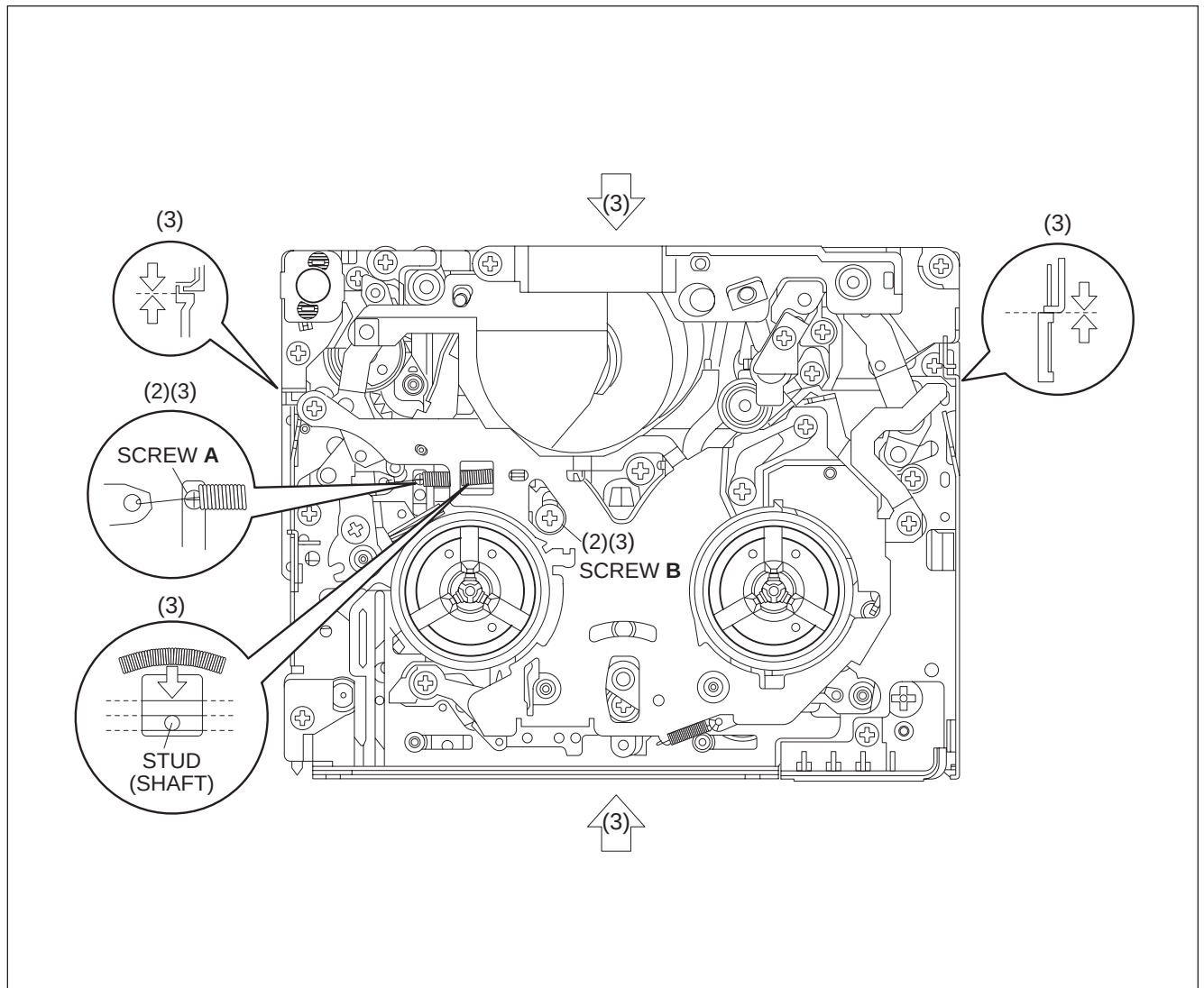


Fig.2-1-26

### 2.1.7.2 Adjustment of the Tension Arm and Pad Arm Assemblies

Use Fig. 2-1-27 as the reference unless otherwise specified.

- (1) Set the PLAY mode.  
See Fig. 2-1-8.
- (2) Loosen the screw **A**.
- (3) With the take-up side at the bottom, align the extreme end of the Tension Arm Assembly with the crossed grooves on the screw **B** that retains the Loading Motor Assembly and then tighten the screw **A**.  
The tightening torque should be  $0.069 \text{ N}\cdot\text{m}$  ( $0.7 \text{ kgf}\cdot\text{cm}$ ).
- (4) Check the operation.  
Repeat unloading and loading several times and make sure that the Tension Arm Assembly is located within the normal range.

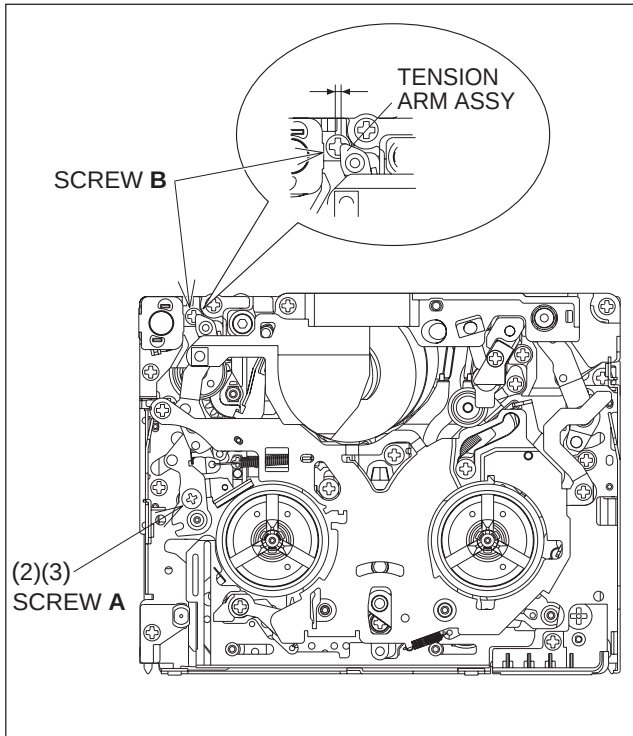


Fig.2-1-27

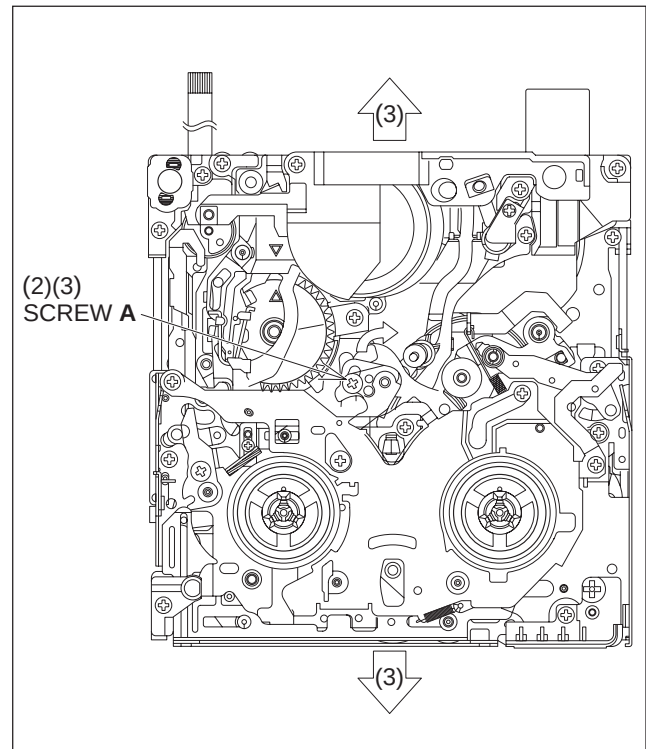


Fig.2-1-28

### 2.1.7.3 Adjustment of the Slide Lever 2

Use Fig. 2-1-28 as the reference unless otherwise specified.

- (1) Set the C IN mode.  
See Fig. 2-1-4.
- (2) Loosen the screw **A**.
- (3) Set the Main Deck and Slide Deck Assemblies apart so that they do not rattle, then tighten the screw **A** by screwing it fully toward the Drum Assembly.  
The tightening torque should be  $0.069 \text{ N}\cdot\text{m}$  ( $0.7 \text{ kgf}\cdot\text{cm}$ ).
- (4) Check the operation.  
Repeat unloading and loading several times and make sure that these operations can be performed smoothly without producing rattles.

## 2.1.8 SERVICE NOTE

Use the following chart to manage mechanism parts that are removed for disassembling the mechanism.

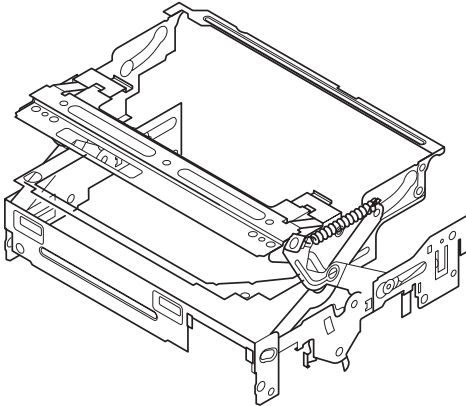
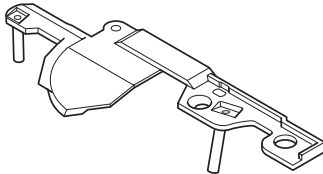
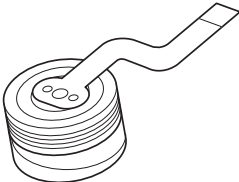
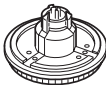
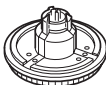
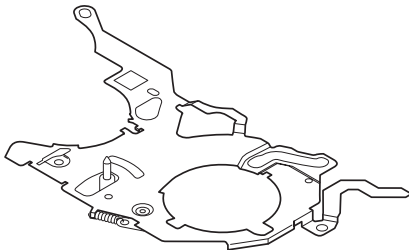
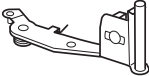
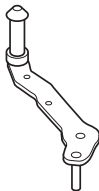
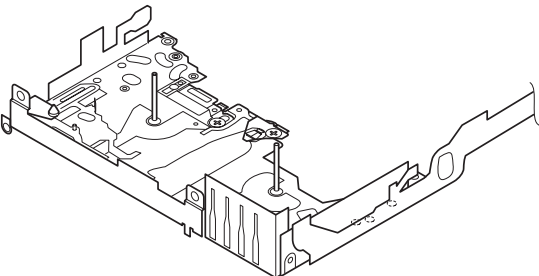
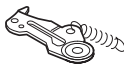
|            |                                                                                                                                     |                                                                                                                                     |                                                                                                                                                                                                                                                                     |                                                                                                                                  |                              |                                                                                                                                |
|------------|-------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Fig.2-1-14 | <div>[ 1 ] CASSETTE HOUSING ASSY</div> <div></div> |                                                                                                                                     | Fig.2-1-15                                                                                                                                                                                                                                                          | <div>[ 2 ] UPPER BASE ASSY</div> <div></div>  |                              |                                                                                                                                |
| Fig.2-1-15 | <div>[ 3 ] DRUM ASSY</div> <div></div>            | Fig.2-1-16                                                                                                                          | <div>[ 4 ] REEL DISK ASSY(SUP)</div> <div></div> <div>[ 5 ] REEL DISK ASSY(TU)</div> <div></div> | <div>[ 6 ] REEL COVER ASSY</div> <div></div> |                              |                                                                                                                                |
| Fig.2-1-17 | <div>[ 7 ] TENSION ARM ASSY</div> <div></div>    | <div>[ 8 ] SLANT POLE ARM ASSY</div> <div></div> | <div>[ 9 ] TU ARM ASSY</div> <div></div>                                                                                                                                       | <div>[10] SWING ARM ASSY</div> <div></div>  |                              |                                                                                                                                |
| Fig.2-1-18 | <div>[11] SLIDE DECK ASSY</div> <div></div>      |                                                                                                                                     | Fig.2-1-19                                                                                                                                                                                                                                                          | <div>[12] PAD ARM ASSY</div> <div></div>     | <div>[13]</div> <div>—</div> | <div>[14] TU BRAKE ASSY</div> <div></div> |

Fig.2-1-29

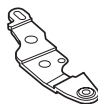
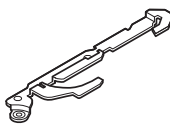
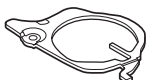
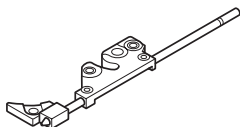
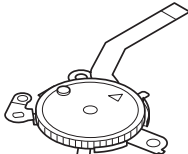
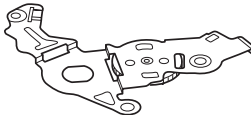
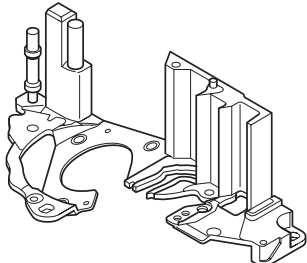
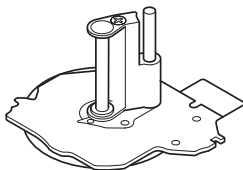
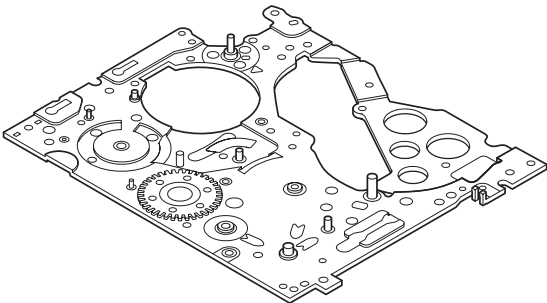
|            |                                                                                     |                                                                                     |                                                                                      |                                                                                      |                                                                                       |
|------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Fig.2-1-20 | <b>[15]</b> TENSION CTL<br>LEVER ASSY                                               | <b>[16]</b> CENTER GEAR                                                             | <b>[17]</b> PINCH ROLLER<br>ARM F ASSY                                               | <b>[18]</b> TENSION<br>CTL PLATE<br>ASSY                                             | <b>[19]</b> BRAKE CTL<br>LEVER<br>ASSY                                                |
|            |    |    |     |    |    |
| Fig.2-1-21 | <b>[20]</b> MOTOR<br>BRACKET<br>ASSY                                                | <b>[21]</b> GUIDE<br>RAIL ASSY                                                      | <b>[22]</b> SLIDE LEVER 2<br>ASSY                                                    | <b>[23]</b> LOADING<br>PLATE ASSY                                                    |                                                                                       |
|            |                                                                                     |                                                                                     |    |   |                                                                                       |
|            |                                                                                     |                                                                                     | <b>[24]</b> MODE GEAR                                                                | <b>[25]</b> EJECT LEVER                                                              |                                                                                       |
|            |                                                                                     |                                                                                     |   |   |                                                                                       |
| Fig.2-1-22 | <b>[26]</b> BASE R ASSY                                                             | <b>[27]</b> ROTARY<br>ENCODER                                                       | <b>[28]</b> GEAR COVER<br>ASSY                                                       | <b>[29]</b> MAIN CAM ASSY                                                            |                                                                                       |
|            |   |   |   |  |                                                                                       |
| Fig.2-1-23 | <b>[30]</b> SLIDE ARM<br>ASSY                                                       | <b>[31]</b> CONNECT<br>GEAR 2                                                       | <b>[32]</b> SUB CAM<br>ASSY                                                          | <b>[33]</b> CONTROL<br>ARM ASSY                                                      | <b>[34]</b> REEL GEAR 1                                                               |
|            |  |  |   |  |  |
| Fig.2-1-24 | <b>[35]</b> DRUM BASE ASSY                                                          | <b>[36]</b> CAPSTAN MOTOR                                                           | <b>[37]</b> MAIN DECK ASSY                                                           |                                                                                      |                                                                                       |
|            |  |  |  |                                                                                      |                                                                                       |

Fig.2-1-30

**2.1.9 SERVICE NOTE**  
 Use the following chart to manage screws.

|                                    |       |     |       |        |      |          |          |      |       |
|------------------------------------|-------|-----|-------|--------|------|----------|----------|------|-------|
| Symbol No.                         | [1]   | [2] | [3]   | [6]    | [10] | [11]     | [20]     | [21] | [22]  |
| Removing order of screw            | 1 2 3 | 4   | 5 6 7 | 8 9 10 | 11   | 12 13 14 | 15 16 17 | 18   | 19 20 |
| Place to stick screw               |       |     |       |        |      |          |          |      |       |
| Reference drawing (Fig. No.2-1-**) | 14    |     | 15    | 16     | 17   | 18       | 21       |      | 22    |
| Screw tightening torque            | I     | II  |       |        |      |          |          |      |       |
|                                    |       |     |       |        |      |          |          |      | III   |

|                                    |             |      |          |      |      |
|------------------------------------|-------------|------|----------|------|------|
| Symbol No.                         | [27]        | [28] | [32]     | [35] | [36] |
| Removing order of screw            | 21 22 23 24 | 25   | 26 27 28 | 29   | 30   |
| Place to stick screw               |             |      |          |      |      |
| Reference drawing (Fig. No.2-1-**) | 22          |      | 23       | 24   |      |
| Screw tightening torque            | II          |      |          | IV   | V    |

<NOTE>

•Pay careful attention to tightening torque for each screw.

I : 0.069N・m(0.7kgf・cm)

II : 0.055N・m(0.56kgf・cm)

III : 0.0198N・m(0.2kgf・cm)

IV : 0.078N・m(0.8kgf・cm)

V : 0.039N・m(0.4kgf・cm)

Fig.2-1-31

## 2.1.10 REMARKS

### 2.1.10.1 Cleaning

- (1) For cleaning of the upper drum (particularly video heads), use fine-woven cotton cloth with alcohol soaks through. Do not move the cloth but turn the upper drum counterclockwise.

**NOTE:**

Make sure not to move the cloth in the vertical direction to the video head, since it may cause damage of the video heads.

- (2) For cleaning of parts of the tape transport system except the upper drum, use fine-woven cotton cloth or cotton swab soaked alcohol.
- (3) After cleaning, confirm that the cleaned parts are completely dry before loading the deck with cassette tape.

### 2.1.10.2 Applying oil and grease

- (1) Periodical oiling and greasing are not required but should be done to new parts when replacing. If oil and grease on the other parts of the other party are old and dirty, wipe them clean and apply new oil or grease.
- (2) For parts and points to apply oil and grease, refer to the exploded view of the 3.1 DVC MECHANISM ASSEMBLY. Fig.2-1-32 specifies oil and grease to be used.
- (3) When oiling, clean the objective parts with alcohol first and apply one or two drop(s) of oil. Too much oiling causes rotary parts to slip because of oil leakage.

| Classification  | Part No.    | Symbol in drawing |
|-----------------|-------------|-------------------|
| Grease          | KYODO-SH-JB | AA                |
| Oil             | YTU94027    | BB                |
| Grease (HANARL) | RX-410R     | CC                |

specifies oil and grease to be used

Fig.2-1-32

## 2.2 VHS-C MECHANISM

### 2.2.1 Precautions

- (1) When fastening parts, pay careful attention to the tightening torque of each screw. Unless otherwise specified, tighten a screw with the torque of 0.216 N•m (2.2 kgf•cm). Torque setting value of torque driver is limited. At the values over the maximum torque setting value, fasten a screw manually not to damage the screw thread.
- (2) Be sure to disconnect the set from the power supply before fastening and soldering parts.
- (3) When disconnecting/connecting wires, be careful not to get them and their connectors damaged.
- (4) When replacing parts, be very careful neither to damage other parts nor to fit wrong parts by mistake.

#### Example

| STEP/LOC.<br>No. | PART NAME            |   | FIG. | REMOVAL      | INSTALLATION                    |
|------------------|----------------------|---|------|--------------|---------------------------------|
|                  |                      |   |      | POINT        | ADJUSTMENT<br>CONDITION<br>NOTE |
| [1]              | ROLLER BASE ASSEMBLY | T | M1   | (S1)         | —                               |
| [2]              | TENSION ARM ASSEMBLY | T | M1   | (P1), (W1a)  | —                               |
| [3]              | REEL DISC (SUP)      | T | M1   | (W1a), (W1b) | —                               |

↑  
\*1

↑  
\*2

↑  
\*3

↑  
\*4

↑  
\*5

↑  
\*6

### 2.2.2 How to read the disassembly and assembly

#### \*1 Order of steps in Procedure

When reassembling, perform the step(s) in the reverse order. These numbers are also used as the identification (location) No. of parts Figures.

#### \*2 Part to Name be removed or installed.

#### \*3 Location of part.

T = The Upper side  
B = The Lower side

#### \*4 Fig. No. showing Procedure or Part Location.

M = Mechanism

#### \*5 Identification of part to be removed, unhooked, unlocked, released, unplugged, unclamped or unsoldered.

P = Spring

W = Washer

S = Screw

\* = Unhook, unlock, release, unplug or unsolder.

#### Example

- Remove (W1)=Washer W1.
- Remove the solder at (SD1)=Point SD1.
- Disconnect A = Connector A.

#### \*6 Adjustment information for installation.

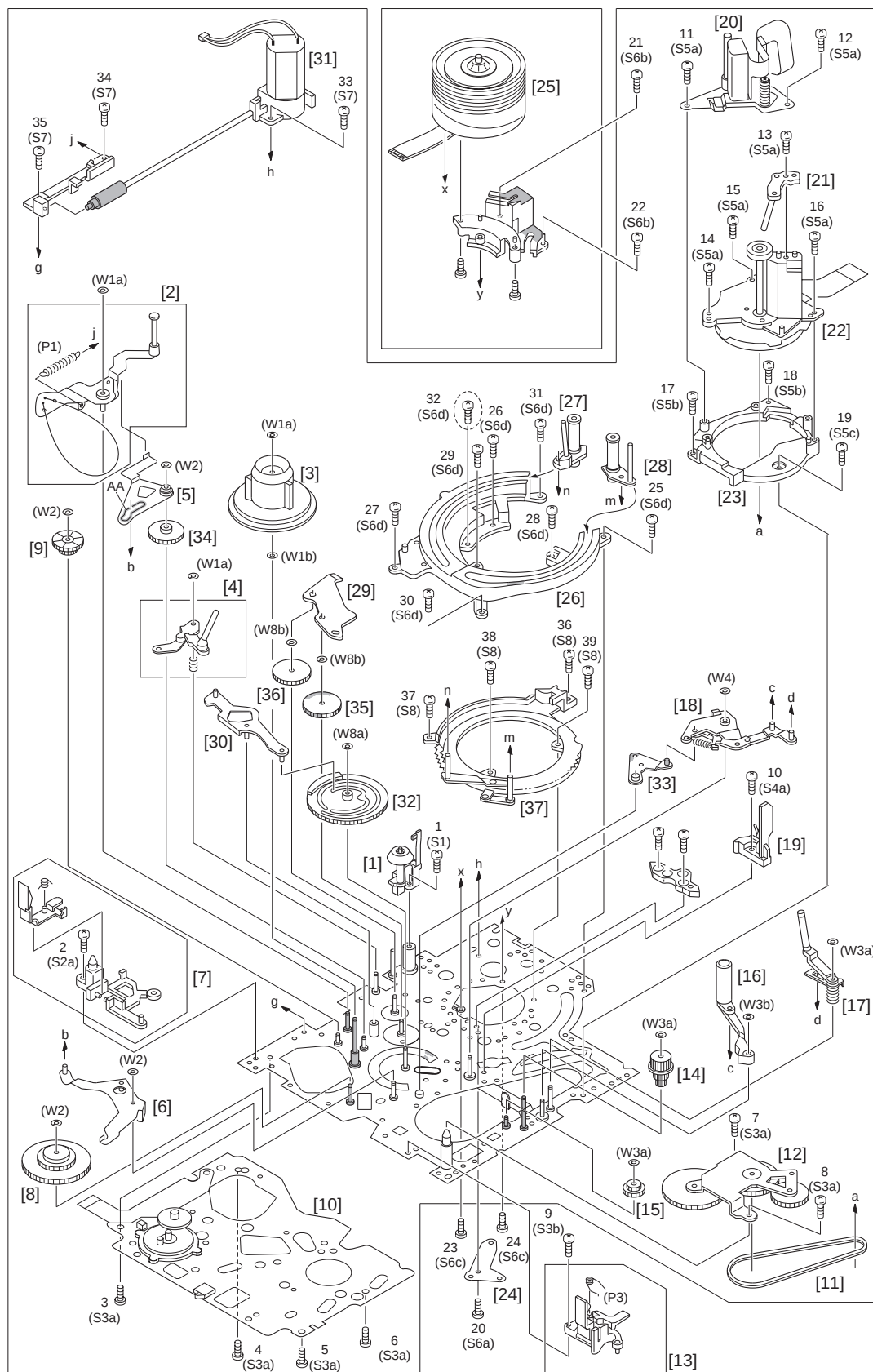
(+) = Refer to Exploded Views for Lubrication information.

### 2.2.3 DISASSEMBLY/ASSEMBLY PROCEDURE TABLE

This procedure starts with the condition that the cabinet parts and deck parts. Also, all the following procedures for adjustment and parts replacement should be performed in STOP mode. When reassembling, perform the step(s) in the reverse order.

| STEP/LOC.<br>No. | PART NAME               |     | FIG. | REMOVAL                 | INSTALLATION                                                                                                                      |
|------------------|-------------------------|-----|------|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
|                  |                         |     |      | POINT                   | ADJUSTMENT<br>CONDITION<br>NOTE                                                                                                   |
| [1]              | ROLLER BASE ASSY        | T   | M1   | (1)                     | —                                                                                                                                 |
| [2]              | TENSION ARM ASSY        | T   | M1   | (P1), (W1a)             | —                                                                                                                                 |
| [3]              | REEL DISC               | T   | M1   | (W1a), (W1b)            | —                                                                                                                                 |
| [4]              | SLANT ARM ASSY          | T   | M1   | (W1a)                   | —                                                                                                                                 |
| [5]              | CANCEL LEVER ASSY       | T   | M2   | (W2)                    | —                                                                                                                                 |
| [6]              | EJECT LEVER ASSY        | T   | M2   | (W2)                    | —                                                                                                                                 |
| [7]              | CASSETTE GUIDE (LEFT)   | T   | M2   | (2)                     | —                                                                                                                                 |
| [8]              | SUPPLY CLUTCH ASSY      | T   | M2   | (W2)                    | —                                                                                                                                 |
| [9]              | WHEEL GEAR              | T   | M2   | (W2)                    | See, Adjustment procedure for<br>Section 2.2.5                                                                                    |
| [10]             | ROTARY ENCODER          | B   | M3   | 4(S3a)                  | The function of this part varies according<br>to the ASSY (VHS/SVHS) which this<br>part is incorporated in. (Refer to fig. 2-2-6) |
| [11]             | TIMING BELT             | B   | M3   | —                       | —                                                                                                                                 |
| [12]             | CENTER PULLEY UNIT      | T/B | M3   | 2(S3a)                  | —                                                                                                                                 |
| [13]             | CASSETTE GUIDE (R) ASSY | T   | M3   | (S3b), (P3)             | (Only use SVHS model)                                                                                                             |
| [14]             | TAKE UP GEAR            | T   | M3   | (W3a)                   | —                                                                                                                                 |
| [15]             | BRAKE SUB GEAR          | T   | M3   | (W3a)                   | —                                                                                                                                 |
| [16]             | PINCH ROLLER ARM ASSY   | T   | M3   | (W3b)                   | —                                                                                                                                 |
| [17]             | TAKE UP GUIDE ARM ASSY  | T   | M3   | (W3a)                   | —                                                                                                                                 |
| [18]             | LINK ARM ASSY           | T   | M4   | (W4)                    | —                                                                                                                                 |
| [19]             | LED GUIDE               | T   | M4   | (S4a)                   | —                                                                                                                                 |
| [20]             | A/C HEAD UNIT           | T   | M4   | 2(S4b)                  | —                                                                                                                                 |
| [21]             | SLANT POLE BASE ASSY    | T   | M5   | (S5a)                   | —                                                                                                                                 |
| [22]             | CAPSTAN MOTOR           | T   | M5   | 3(S5a)                  | —                                                                                                                                 |
| [23]             | MOTOR BASE              | T   | M5   | 2(S5b), (S5c)           | —                                                                                                                                 |
| [24]             | BRUSH                   | B   | M6   | (S6a)                   | —                                                                                                                                 |
| [25]             | DRUM FINAL ASSY         | T/B | M6   | 2(S6b), 2(S6c) *CATCHER | —                                                                                                                                 |
| [26]             | GUIDE RAIL              | T   | M6   | 7(S6d), 8(S6d)          | (Refer to part list.)                                                                                                             |
| [27]             | POLE BASE (S)ASSY       | T   | M6   | —                       | —                                                                                                                                 |
| [28]             | POLE BASE (T)ASSY       | T   | M6   | —                       | —                                                                                                                                 |
| [29]             | COVER PLATE             | T   | M7   | —                       | —                                                                                                                                 |
| [30]             | DRIVE LEVER ASSY        | T   | M7   | —                       | —                                                                                                                                 |
| [31]             | MOTOR BRACKET ASSY      | T   | M7   | 3(S7)                   | —                                                                                                                                 |
| [32]             | CONTROL CAM             | T   | M8   | (W8a)                   | See, Adjustment procedure for<br>Section 2.2.5                                                                                    |
| [33]             | LINK LEVER              | T   | M8   | —                       | See, Adjustment procedure for<br>Section 2.2.5                                                                                    |
| [34]             | MIDDLE GEAR             | T   | M8   | —                       | —                                                                                                                                 |
| [35]             | LOADING GEAR(T) ASSY    | T   | M8   | (W8b)                   | See, Adjustment procedure for<br>Section 2.2.5                                                                                    |
| [36]             | LOADING GEAR(S) ASSY    | T   | M8   | (W8b)                   | —                                                                                                                                 |
| [37]             | LOADING RING ASSY       | T   | M8   | 4(S8)                   | See, Adjustment procedure for<br>Section 2.2.5                                                                                    |

Fig.2-2-1



<TOP VIEW>

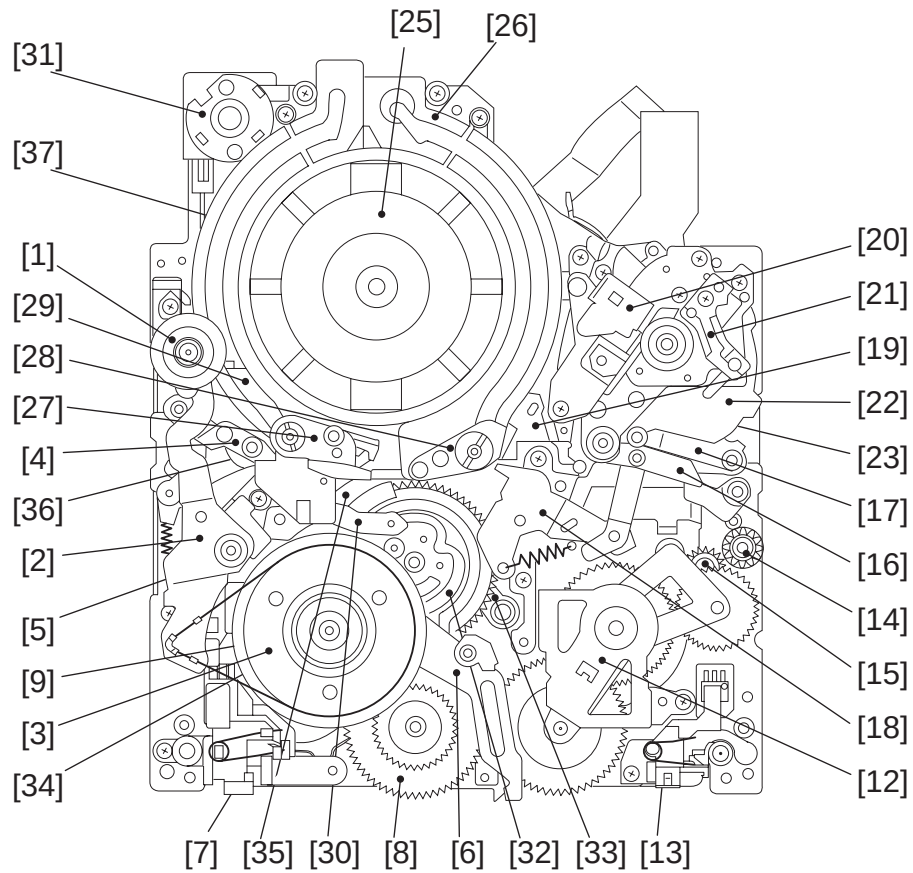


Fig.2-2-3

<BOTTOM VIEW>

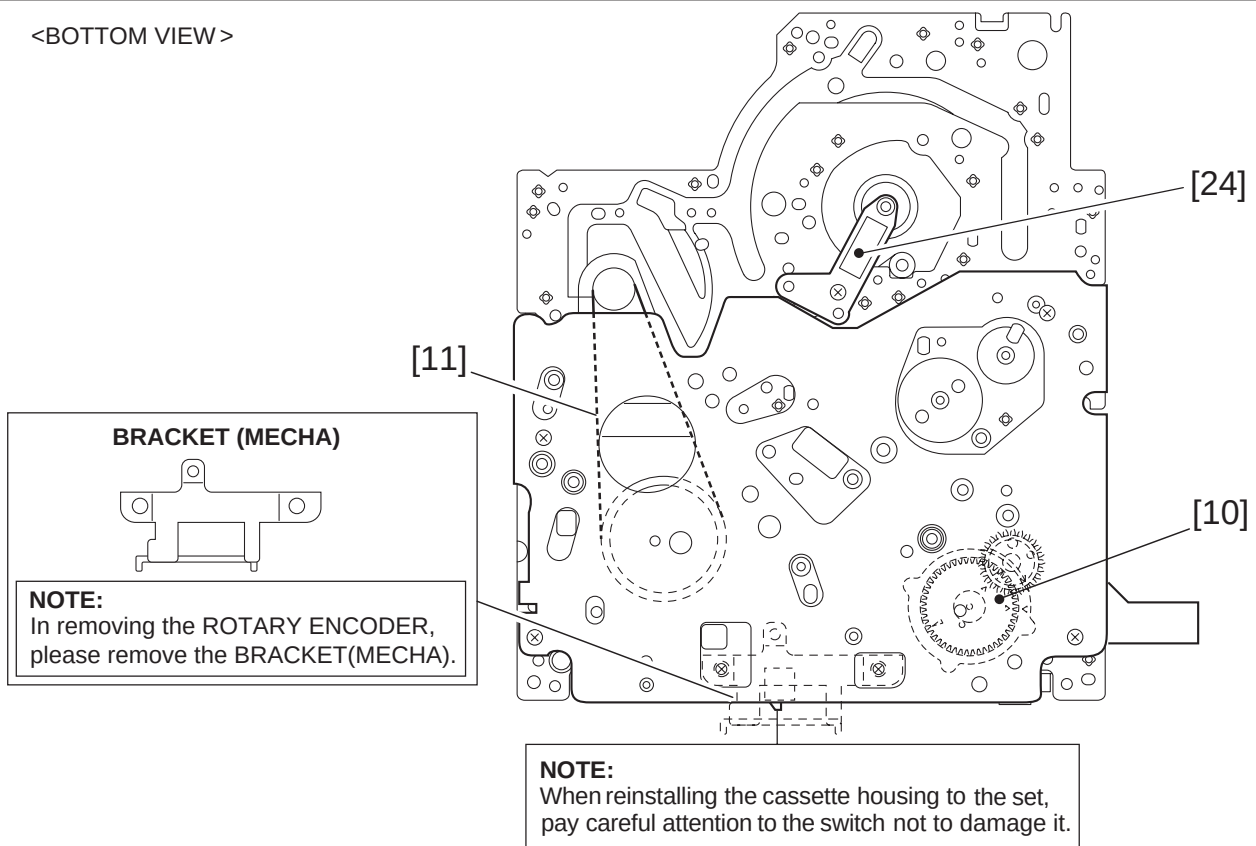


Fig.2-2-4

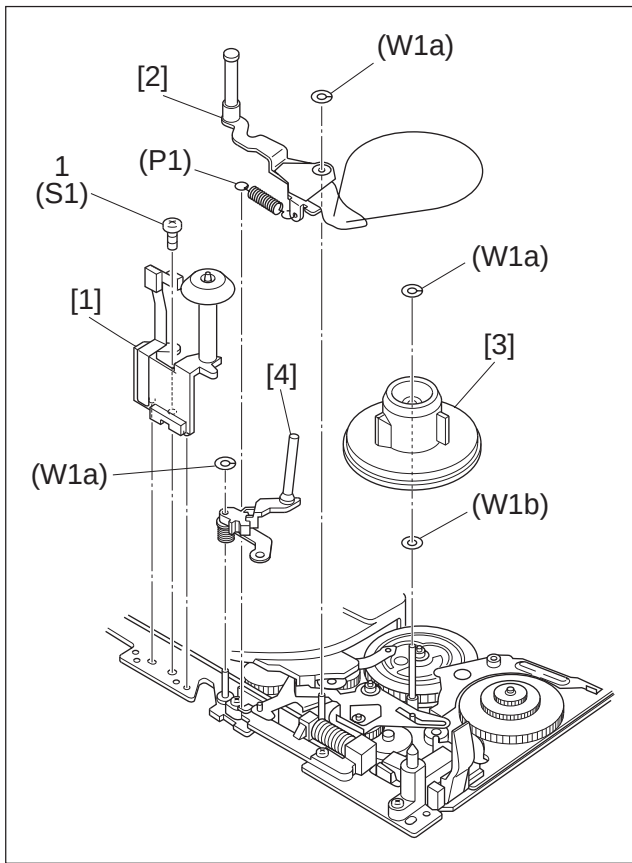


Fig.M1

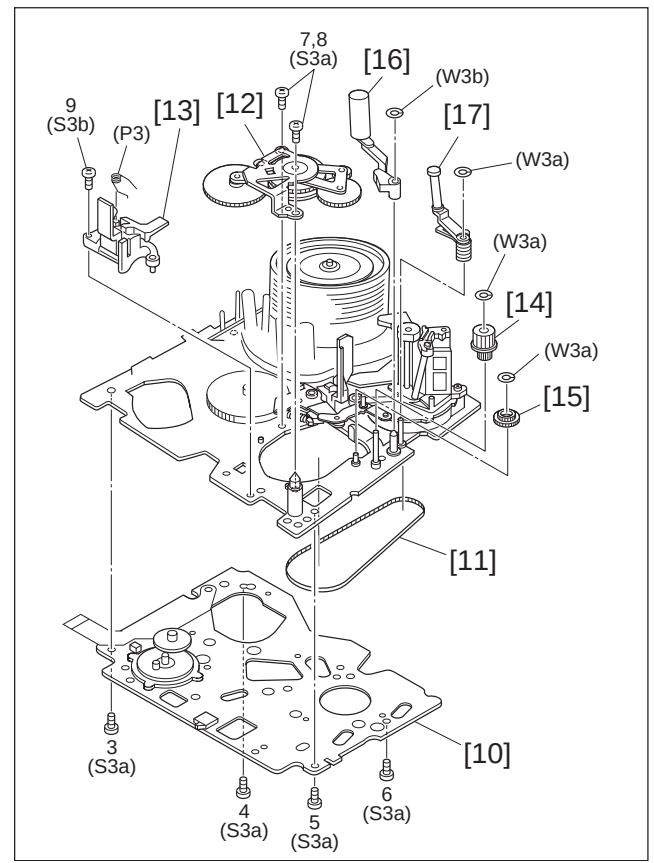


Fig.M3

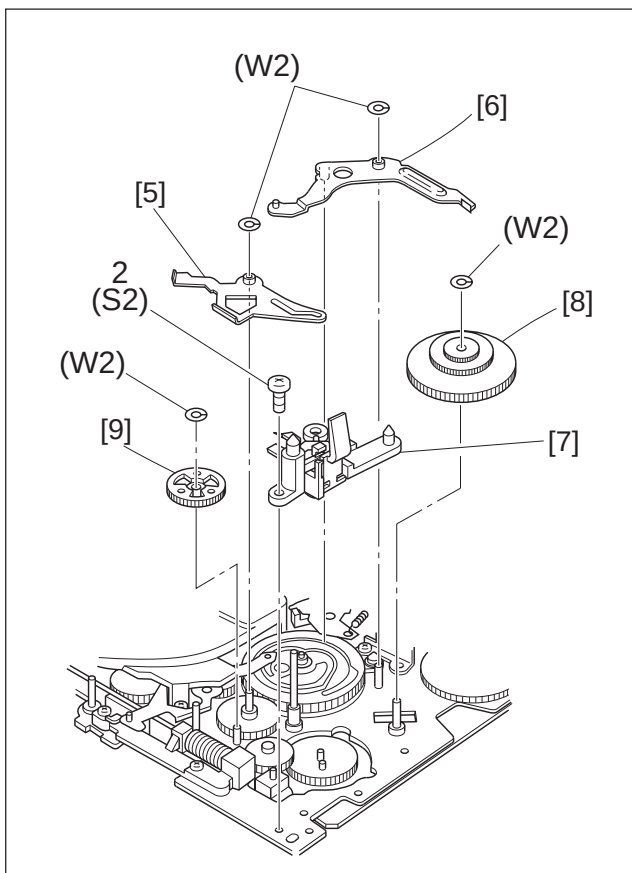
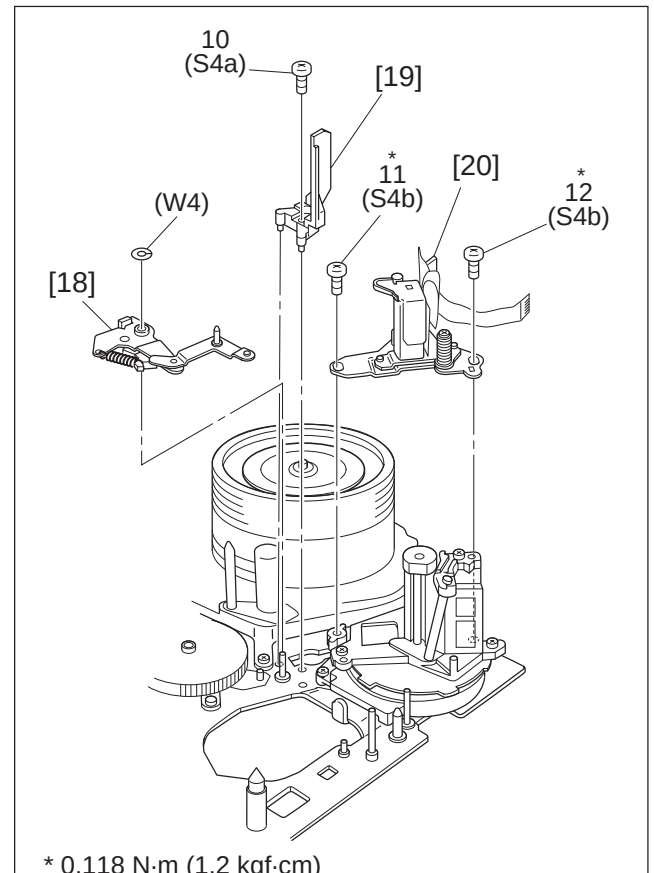


Fig.M2



\* 0.118 N·m (1.2 kgf·cm)

Fig.M4

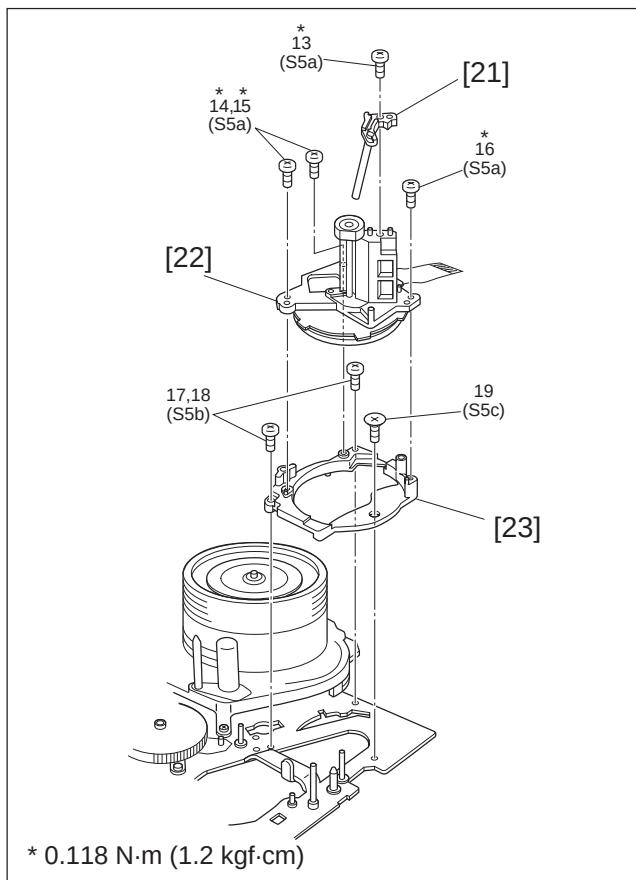


Fig.M5

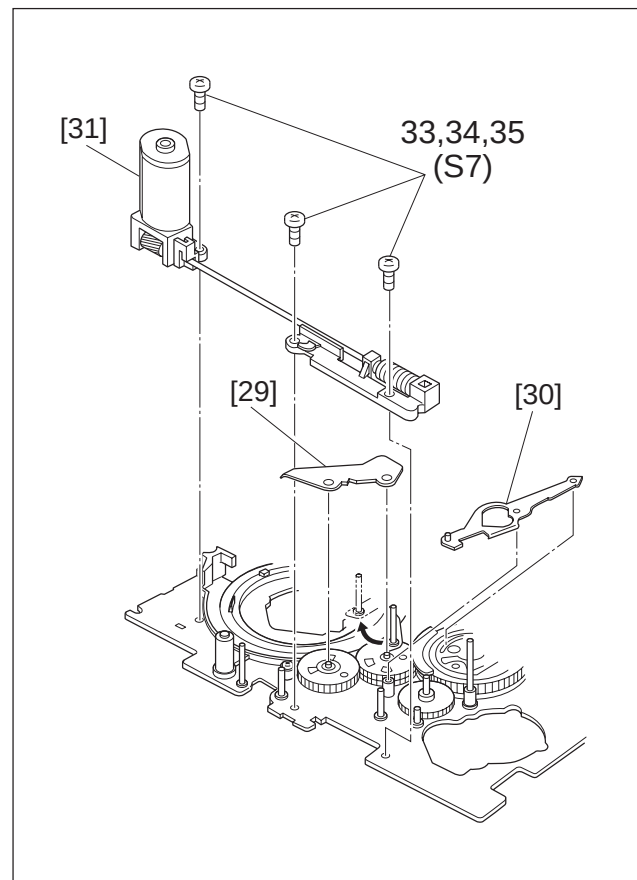


Fig.M7

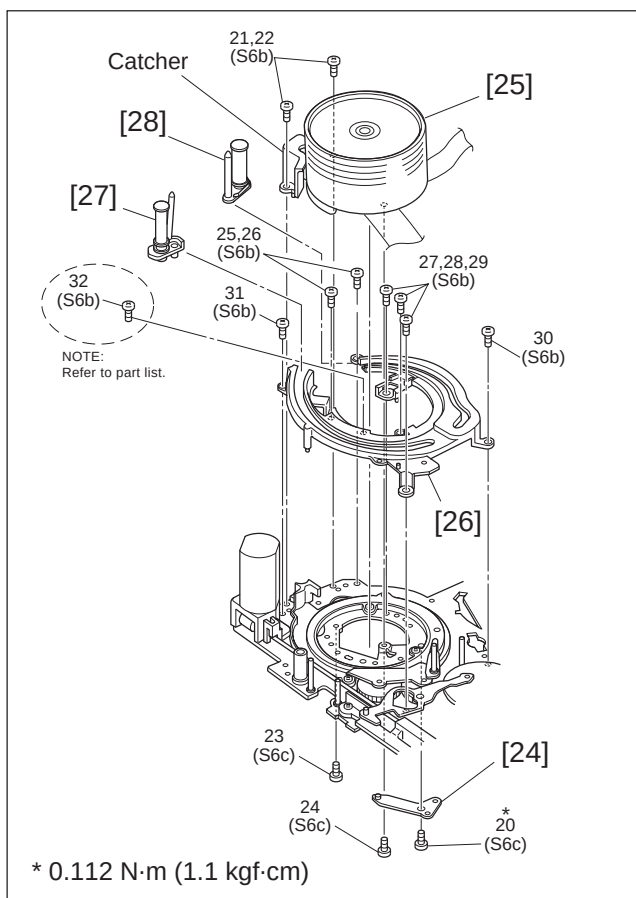


Fig.M6

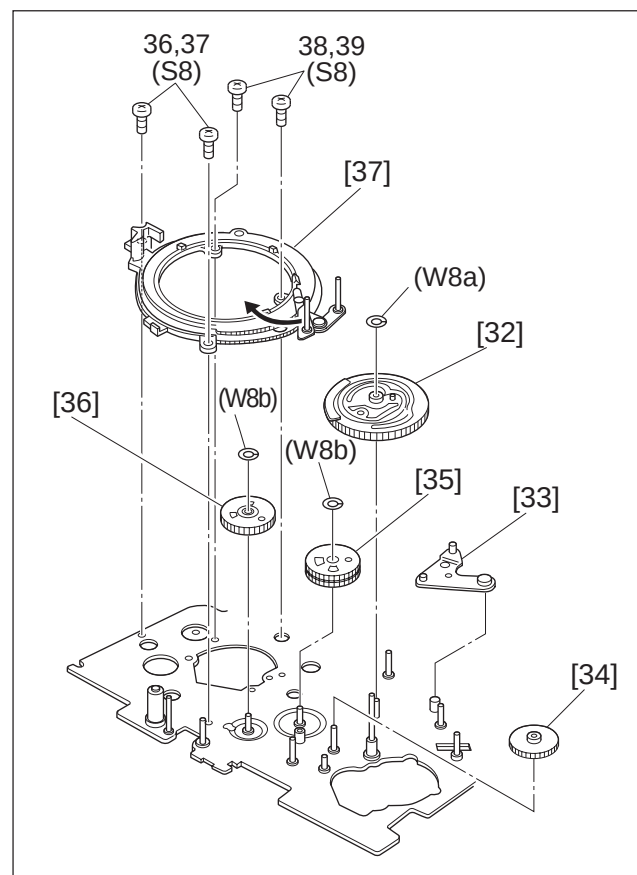


Fig.M8

## 2.2.4 CHECKUP AND ADJUSTMENT OF MECHANISM PHASE

### NOTE:

Pay careful attention to the installing order and phase of mechanism parts of the loading system.

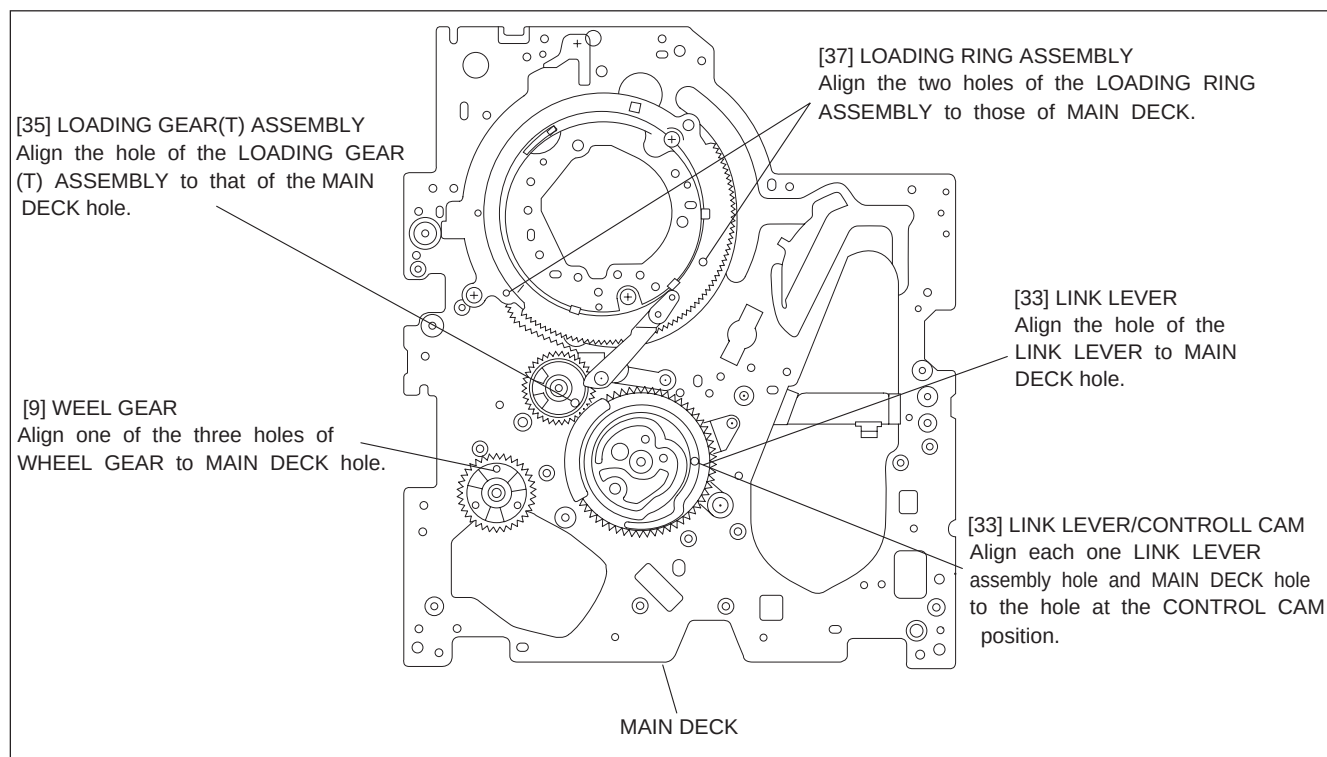


Fig.2-2-5 Top of main deck

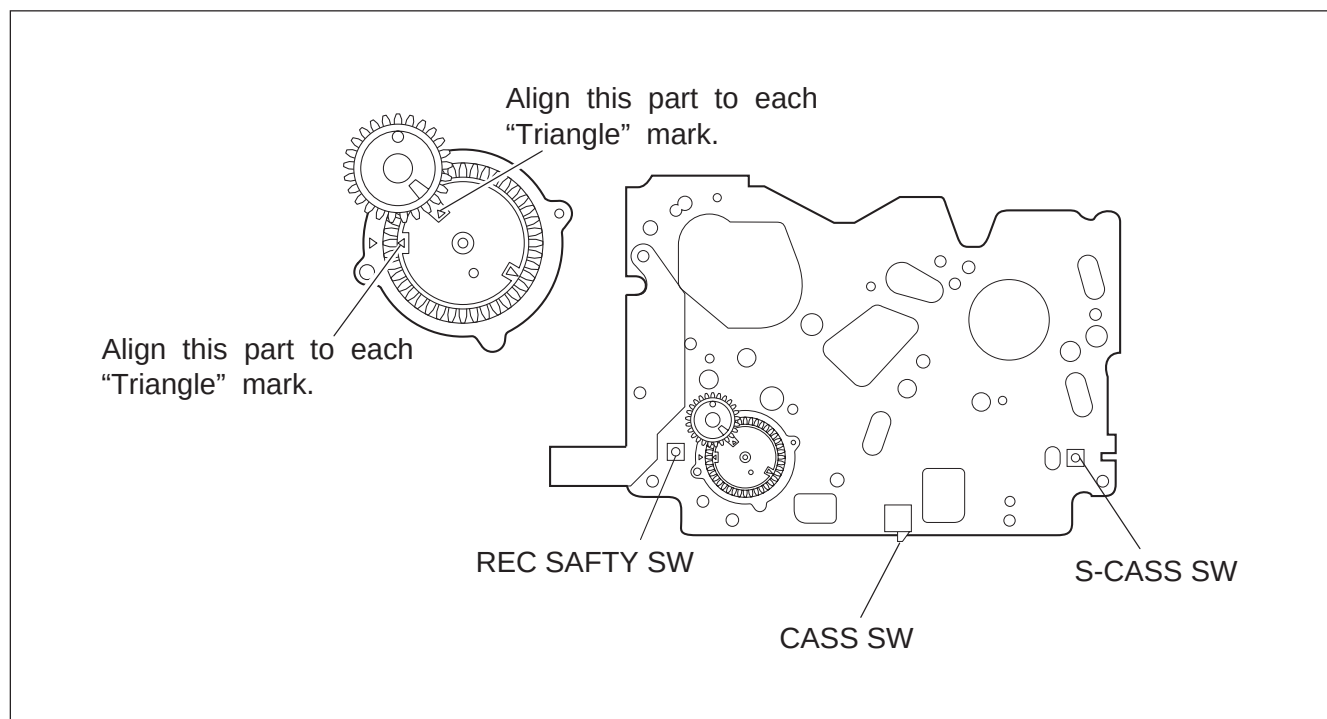


Fig.2-2-6 Rotary encoder

2.2.5 SERVICE NOTE

Use the following chart to manage screws.

|                              |     |     |      |   |   |   |      |      |      |      |      |      |      |    |    |    |    |    |    |  |   |
|------------------------------|-----|-----|------|---|---|---|------|------|------|------|------|------|------|----|----|----|----|----|----|--|---|
| Symbol No.                   | [1] | [7] | [10] |   |   |   | [12] | [13] | [19] | [20] | [21] | [22] | [23] |    |    |    |    |    |    |  |   |
| Removing order of screw      | 1   | 2   | 3    | 4 | 5 | 6 | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14 | 15 | 16 | 17 | 18 | 19 |  |   |
| Place to stick screw         |     |     |      |   |   |   |      |      |      |      |      |      |      |    |    |    |    |    |    |  |   |
| Reference drawing (Fig. No.) | M1  | M2  | M3   |   |   |   |      |      | M4   |      | M5   |      |      |    |    |    |    |    |    |  |   |
| Screw tightening torque      | I   |     |      |   |   |   |      |      |      |      | II   |      |      |    |    |    |    |    |    |  | I |

|                              |      |      |    |    |    |      |    |    |    |      |      |    |    |    |    |    |    |    |    |    |
|------------------------------|------|------|----|----|----|------|----|----|----|------|------|----|----|----|----|----|----|----|----|----|
| Symbol No.                   | [24] | [25] |    |    |    | [26] |    |    |    | [31] | [37] |    |    |    |    |    |    |    |    |    |
| Removing order of screw      | 20   | 21   | 22 | 23 | 24 | 25   | 26 | 27 | 28 | 29   | 30   | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 |
| Place to stick screw         |      |      |    |    |    |      |    |    |    |      |      |    |    |    |    |    |    |    |    |    |
| Reference drawing (Fig. No.) |      |      |    |    |    | M6   |    |    |    | M7   |      |    |    | M8 |    |    |    |    |    |    |
| Screw tightening torque      | III  | I    |    |    |    |      |    |    |    |      |      |    |    |    |    |    |    |    |    |    |

Fig.2-2-7

<NOTE>

· Pay careful attention to tightening torque for each screw.  
Torque setting value of torque driver is limited. At the values over the maximum torque setting value, fasten a screw manually not to damage the screw thread.

I : 0.216N・m(2.2kgf・cm)      II : 0.118N・m(1.2kgf・cm)      III : 0.112N・m(1.1kgf・cm)

## 2.2.6 REMARKS

### 2.2.6.1 Cleaning

- (1) For cleaning of the upper drum (particularly video heads), use fine-woven cotton cloth with alcohol soaks through. Do not move the cloth but turn the upper drum counterclockwise.

**NOTE:**

Make sure not to move the cloth in the vertical direction to the video head, since it may cause damage of the video heads.

- (2) For cleaning of parts of the tape transport system except the upper drum, use fine-woven cotton cloth or cotton swab soaked alcohol.
- (3) After cleaning, confirm that the cleaned parts are completely dry before loading the deck with cassette tape.

### 2.2.6.2 Applying oil and grease

- (1) Periodical oiling and greasing are not required but should be done to new parts when replacing. If oil and grease on the other parts of the other party are old and dirty, wipe them clean and apply new oil or grease.
- (2) For parts and points to apply oil and grease, refer to the exploded view of the 3.2 VHS-C MECHANISM ASSEMBLY. Fig.2-2-8 specifies oil and grease to be used.
- (3) When oiling, clean the objective parts with alcohol first and apply one or two drop(s) of oil. Too much oiling causes rotary parts to slip because of oil leakage.

| Classification | Part No.    | Symbol in drawing |
|----------------|-------------|-------------------|
| Grease         | KYODO-SH-JB | AA                |
| Oil            | YTU94027    | BB                |

specifies oil and grease to be used

Fig.2-2-8

## 2.3 VHS MECHANISM

### 2.3.1 Notes

This model's mechanism relates closely to the rotary encoder and system control circuit (the rotary encoder is meshed with the control cam).

The system control circuit detects the mechanism condition using the rotary encoder's phase (internal switch phase). Therefore, the parts such as the rotary encoder, control plate, loading gear and control cam need to be installed correctly in order for the mechanism to operate properly. (For the mechanism phase adjustment, refer to the installation of each part.)

- Before using a soldering iron, be sure to disconnect the power plug from the AC outlet.
- Do not touch any of the adjustment points until a defect position is specified.
- When plugging or unplugging the connector, be sure not to damage the wire.
- Be sure the springs are hooked all the way around and in the correct direction.
- When performing repairs, take care not to damage a catch, etc.

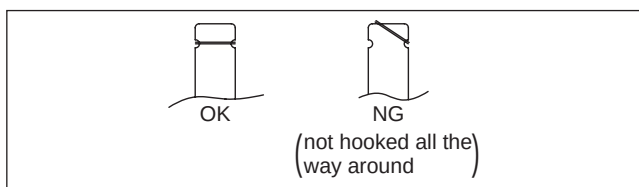


Fig.2-3-1

### 2.3.2 Mechanism operation check

When the mechanism is operated without a cassette loaded, operate the mechanism in the mechanism service mode.

### 2.3.3 Setting the mechanism assembling mode

The mechanism-assembling mode is provided with this mechanism. When disassembling and assembling, it is required to engage this mode.

Set the mode by adopting the following procedures.

- (1) Remove the mechanism assembly using the disassembling procedure.
- (2) Turn gear (a) of the loading motor manually to set the mechanism assembly to the eject end mode. Make sure that the main deck is connected to the guide hole (a) of the drive lever and the seal (a) of the main deck is connected to the mark "E" of the control plate. This condition is called the mechanism-assembling mode.

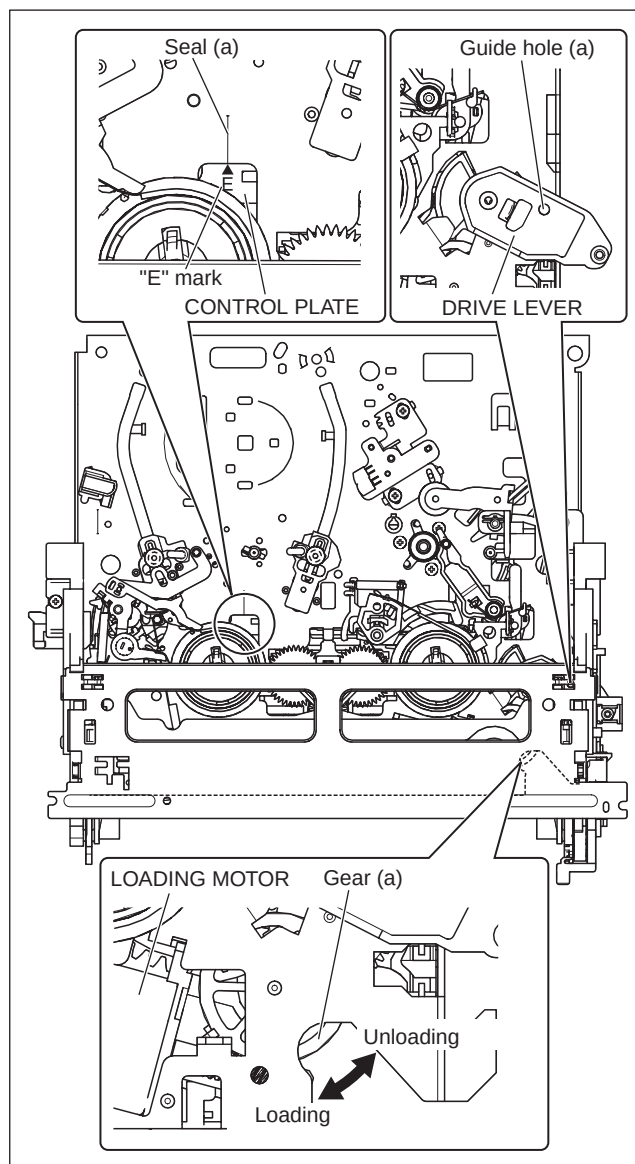


Fig.2-3-2

### 2.3.4 Layout of the main mechanism parts

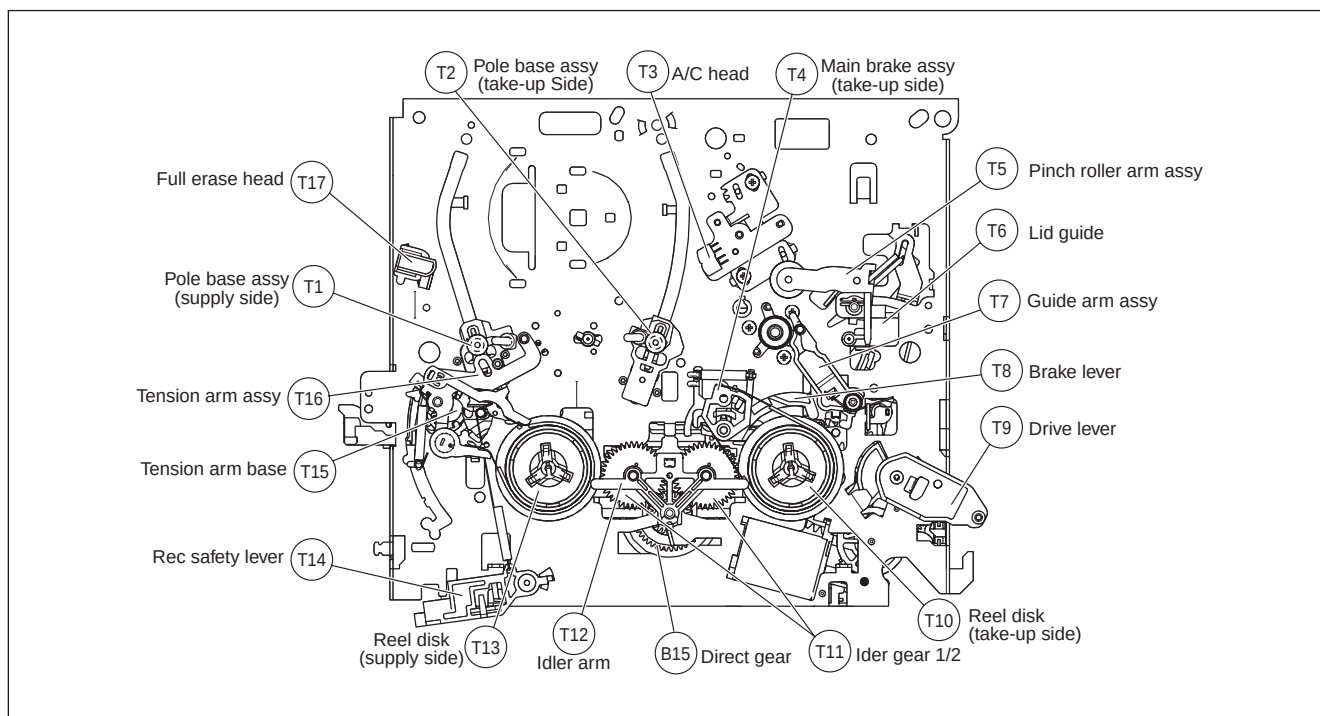


Fig.2-3-3

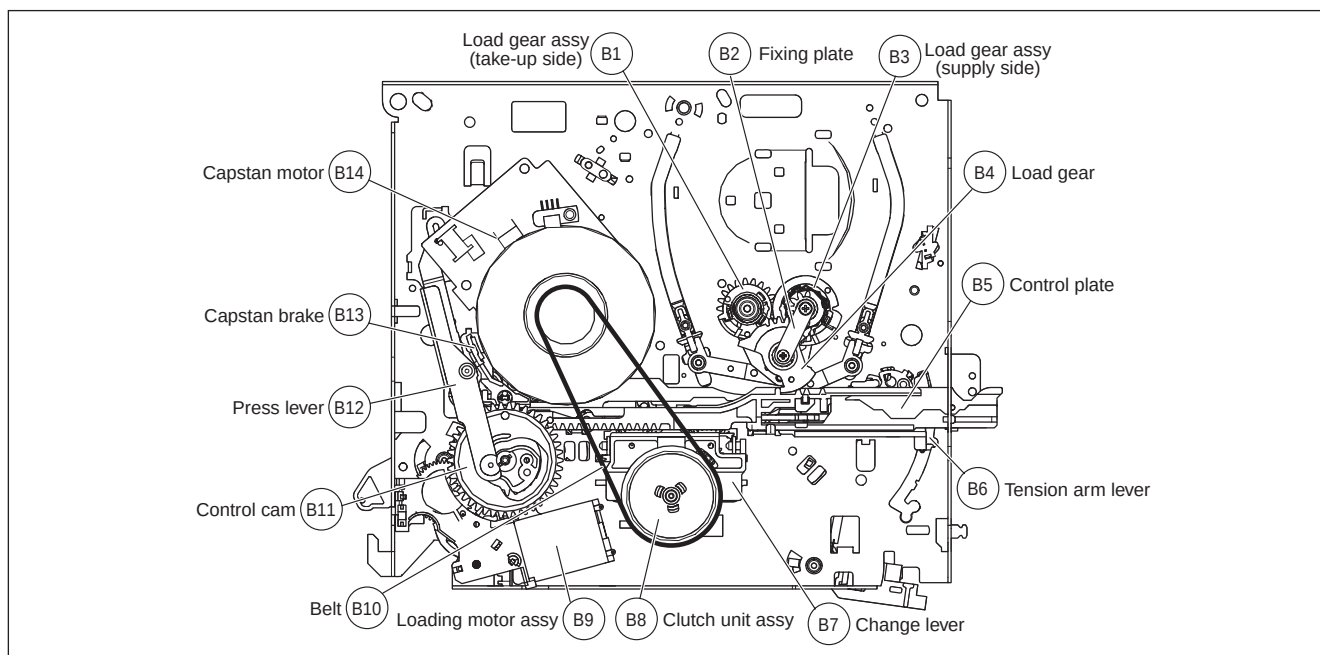


Fig.2-3-4

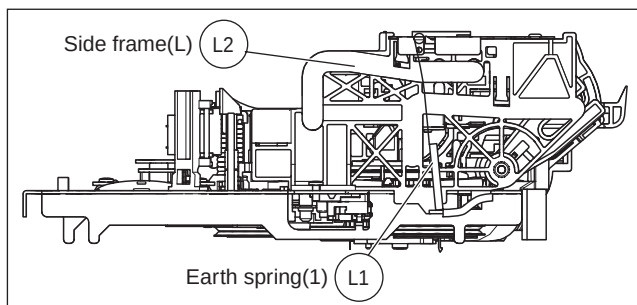


Fig.2-3-5

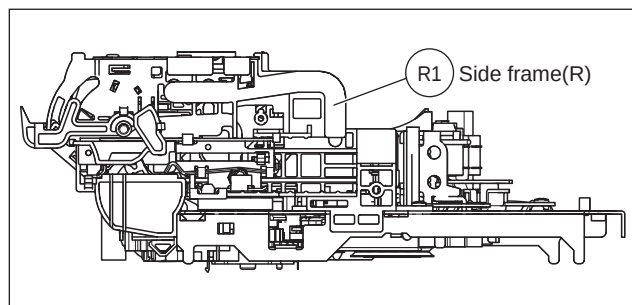


Fig.2-3-6

### 2.3.5 Disassembling procedure table

This table shows the order of parts removal when replacing each part. For replacement, remove the parts in the order of 1 to 13 shown in the table and install the parts in the reverse order.

The symbol number before each part name shows the number in the figure "Layout of the main mechanism parts". T and B on the right of each part name show the side from which the part should be removed (T: From the front of the mechanism, B: From the rear of the mechanism, T/B: From both sides).

| Symbols and numbers |                                        |                               |                         | L1               | -         | -               | L2             | -         | R1             | T6        | T12       | T11            | T4             | T10           | T16         | T15              | B12         | B11         | B13                | B9                 | B10  | B2           | B4        | B3                    | B1                    | B5            | B8          | B15         |
|---------------------|----------------------------------------|-------------------------------|-------------------------|------------------|-----------|-----------------|----------------|-----------|----------------|-----------|-----------|----------------|----------------|---------------|-------------|------------------|-------------|-------------|--------------------|--------------------|------|--------------|-----------|-----------------------|-----------------------|---------------|-------------|-------------|
| Symbols and numbers | Removal parts                          | Front(T)/Back(B) of mechanism | Number of removal steps | Earth spring (L) | Top frame | Cassette holder | Side frame (L) | Drive arm | Side frame (R) | Lid guide | Idler arm | Idler gear 1/2 | Main brake (T) | Reel disk (T) | Tension arm | Tension arm base | Press lever | Control cam | Capstan brake assy | Loading motor assy | Belt | Fixing plate | Load gear | Loading gear assy (S) | Loading gear assy (T) | Control plate | Clutch unit | Direct gear |
|                     | (Reference items)<br>Replacement parts |                               |                         |                  |           |                 |                |           |                |           |           |                |                |               |             |                  |             |             |                    |                    |      |              |           |                       |                       |               |             |             |
| L1                  | 2.1 Earth spring (1)                   | T                             | 1                       |                  |           |                 |                |           |                |           |           |                |                |               |             |                  |             |             |                    |                    |      |              |           |                       |                       |               |             |             |
| -                   | 2.1 Top frame                          | T                             | 2                       | 1                |           |                 |                |           |                |           |           |                |                |               |             |                  |             |             |                    |                    |      |              |           |                       |                       |               |             |             |
| -                   | 2.1 Cassette holder                    | T                             | 3                       | 1                | 2         |                 |                |           |                |           |           |                |                |               |             |                  |             |             |                    |                    |      |              |           |                       |                       |               |             |             |
| L2                  | 2.1 Side frame (L)                     | T                             | 3                       | 1                | 2         |                 |                |           |                |           |           |                |                |               |             |                  |             |             |                    |                    |      |              |           |                       |                       |               |             |             |
| -                   | 2.1 Drive arm                          | T                             | 5                       | 1                | 2         | 3               | 4              |           |                |           |           |                |                |               |             |                  |             |             |                    |                    |      |              |           |                       |                       |               |             |             |
| R1                  | 2.1 Side frame (R)                     | T                             | 3                       | 1                | 2         |                 |                |           |                |           |           |                |                |               |             |                  |             |             |                    |                    |      |              |           |                       |                       |               |             |             |
| T3                  | 2.2 A/C head                           | T                             | 1                       |                  |           |                 |                |           |                |           |           |                |                |               |             |                  |             |             |                    |                    |      |              |           |                       |                       |               |             |             |
| T17                 | - FE head                              | T/B                           | 1                       |                  |           |                 |                |           |                |           |           |                |                |               |             |                  |             |             |                    |                    |      |              |           |                       |                       |               |             |             |
| T7                  | 2.3 Guide arm assy                     | T                             | 1                       |                  |           |                 |                |           |                |           |           |                |                |               |             |                  |             |             |                    |                    |      |              |           |                       |                       |               |             |             |
| T6                  | 2.3 Lid guide                          | T                             | 1                       |                  |           |                 |                |           |                |           |           |                |                |               |             |                  |             |             |                    |                    |      |              |           |                       |                       |               |             |             |
| T5                  | 2.3 Pinch roller arm assy              | T                             | 2                       |                  |           |                 |                |           |                | 1         |           |                |                |               |             |                  |             |             |                    |                    |      |              |           |                       |                       |               |             |             |
| T12                 | 2.4 Idler arm                          | T                             | 4                       | 1                | 2         | 3               |                |           |                |           |           |                |                |               |             |                  |             |             |                    |                    |      |              |           |                       |                       |               |             |             |
| T11                 | 2.4 Idler gear 1/2                     | T                             | 5                       | 1                | 2         | 3               |                |           |                |           | 4         |                |                |               |             |                  |             |             |                    |                    |      |              |           |                       |                       |               |             |             |
| T4                  | 2.5 Main brake assy (T)                | T                             | 6                       | 1                | 2         | 3               |                |           |                |           | 4         | 5              |                |               |             |                  |             |             |                    |                    |      |              |           |                       |                       |               |             |             |
| T10                 | 2.5 Reel disk (T)                      | T                             | 7                       | 1                | 2         | 3               |                |           |                |           | 4         | 5              | 6              |               |             |                  |             |             |                    |                    |      |              |           |                       |                       |               |             |             |
| T16                 | 2.5 Tension arm                        | T                             | 6                       | 1                | 2         | 3               |                |           |                |           | 4         | 5              |                |               |             |                  |             |             |                    |                    |      |              |           |                       |                       |               |             |             |
| T13                 | 2.5 Reel disk (S)                      | T                             | 7                       | 1                | 2         | 3               |                |           |                |           | 4         | 5              |                |               | 6           |                  |             |             |                    |                    |      |              |           |                       |                       |               |             |             |
| T15                 | 2.5 Tension arm base                   | T                             | 7                       | 1                | 2         | 3               |                |           |                |           | 4         | 5              |                |               | 6           |                  |             |             |                    |                    |      |              |           |                       |                       |               |             |             |
| -                   | - T-up head                            | T                             | 8                       | 1                | 2         | 3               |                |           |                |           | 4         | 5              |                |               | 6           | 7                |             |             |                    |                    |      |              |           |                       |                       |               |             |             |
| -                   | - T-up lever                           | T                             | 8                       | 1                | 2         | 3               |                |           |                |           | 4         | 5              |                |               | 6           | 7                |             |             |                    |                    |      |              |           |                       |                       |               |             |             |
| T8                  | 2.5 Brake lever                        | T                             | 8                       | 1                | 2         | 3               |                |           |                |           | 4         | 5              | 6              | 7             |             |                  |             |             |                    |                    |      |              |           |                       |                       |               |             |             |
| T14                 | 2.5 Rec safety lever                   | T                             | 7                       | 1                | 2         | 3               | 4              | 5         | 6              |           |           |                |                |               |             |                  |             |             |                    |                    |      |              |           |                       |                       |               |             |             |
| B12                 | 2.6 Press lever                        | B                             | 1                       |                  |           |                 |                |           |                |           |           |                |                |               |             |                  |             |             |                    |                    |      |              |           |                       |                       |               |             |             |
| B11                 | 2.6 Control cam                        | B                             | 2                       |                  |           |                 |                |           |                |           |           |                |                |               |             |                  | 1           |             |                    |                    |      |              |           |                       |                       |               |             |             |
| B13                 | 2.6 Capstan brake assy                 | B                             | 3                       |                  |           |                 |                |           |                |           |           |                |                |               |             |                  | 1           | 2           |                    |                    |      |              |           |                       |                       |               |             |             |
| B9                  | 2.6 Loading motor assy                 | B                             | 4                       |                  |           |                 |                |           |                |           |           |                |                |               |             |                  | 1           | 2           | 3                  |                    |      |              |           |                       |                       |               |             |             |
| B10                 | 2.7 Belt                               | B                             | 1                       |                  |           |                 |                |           |                |           |           |                |                |               |             |                  |             |             |                    |                    |      |              |           |                       |                       |               |             |             |
| B14                 | 2.7 Capstan motor                      | T/B                           | 2                       |                  |           |                 |                |           |                |           |           |                |                |               |             |                  |             |             |                    |                    | 1    |              |           |                       |                       |               |             |             |
| -                   | - Wire holder                          | T/B                           | 1                       |                  |           |                 |                |           |                |           |           |                |                |               |             |                  |             |             |                    |                    |      |              |           |                       |                       |               |             |             |
| B2                  | 2.7 Fixing plate                       | B                             | 1                       |                  |           |                 |                |           |                |           |           |                |                |               |             |                  |             |             |                    |                    |      |              |           |                       |                       |               |             |             |
| B4                  | 2.7 Load gear                          | B                             | 2                       |                  |           |                 |                |           |                |           |           |                |                |               |             |                  |             |             |                    |                    |      | 1            |           |                       |                       |               |             |             |
| B3                  | 2.7 Loading gear assy(S)               | B                             | 3                       |                  |           |                 |                |           |                |           |           |                |                |               |             |                  |             |             |                    |                    |      | 1            | 2         |                       |                       |               |             |             |
| B1                  | 2.7 Loading gear assy(T)               | B                             | 4                       |                  |           |                 |                |           |                |           |           |                |                |               |             |                  |             |             |                    |                    |      | 1            | 2         | 3                     |                       |               |             |             |
| T1                  | - Pole base assy(S)                    | T/B                           | 4                       |                  |           |                 |                |           |                |           |           |                |                |               |             |                  |             |             |                    |                    |      | 1            | 2         | 3                     |                       |               |             |             |
| T2                  | - Pole base assy(T)                    | T/B                           | 5                       |                  |           |                 |                |           |                |           |           |                |                |               |             |                  |             |             |                    |                    |      | 1            | 2         | 3                     | 4                     |               |             |             |
| -                   | - Load gear base                       | B                             | 5                       |                  |           |                 |                |           |                |           |           |                |                |               |             |                  |             |             |                    |                    |      | 1            | 2         | 3                     | 4                     |               |             |             |
| B5                  | 2.7 Control plate                      | B                             | 6                       |                  |           |                 |                |           |                |           |           |                |                |               |             |                  | 1           | 2           |                    |                    | 3    | 4            | 5         |                       |                       |               |             |             |
| T9                  | - Drive lever                          | T/B                           | 10                      | 1                | 2         | 3               | 4              | 5         | 6              |           |           |                |                |               |             |                  | 7           | 8           |                    | 9                  |      |              |           |                       |                       |               |             |             |
| B8                  | 2.8 Clutch unit                        | B                             | 2                       |                  |           |                 |                |           |                |           |           |                |                |               |             |                  |             |             |                    |                    | 1    |              |           |                       |                       |               |             |             |
| B15                 | 2.8 Direct gear                        | B                             | 3                       |                  |           |                 |                |           |                |           |           |                |                |               |             |                  |             |             |                    |                    | 1    |              |           |                       |                       |               |             | 2           |
| B7                  | - Change lever                         | T/B                           | 6                       |                  |           |                 |                |           |                |           | 1         | 2              |                |               |             |                  |             |             |                    |                    | 3    |              |           |                       |                       |               | 4           | 5           |
| B6                  | - Tension arm lever                    | T/B                           | 14                      | 1                | 2         | 3               |                |           |                |           | 4         | 5              |                |               | 6           | 7                | 8           | 9           |                    |                    | 10   | 11           | 12        |                       |                       | 13            |             |             |

## 2.3.6 REPLACEMENT OF THE MAIN MECHANISM PARTS

### 2.3.6.1 Cassette holder

#### 2.3.6.1.1 Removal

- (1) Remove the screws (a) and (b).
- (2) Hold up the top frame, cassette holder assembly, drive arm assembly and side frames (L/R) all together and remove them by releasing the hooks (a) and (b).

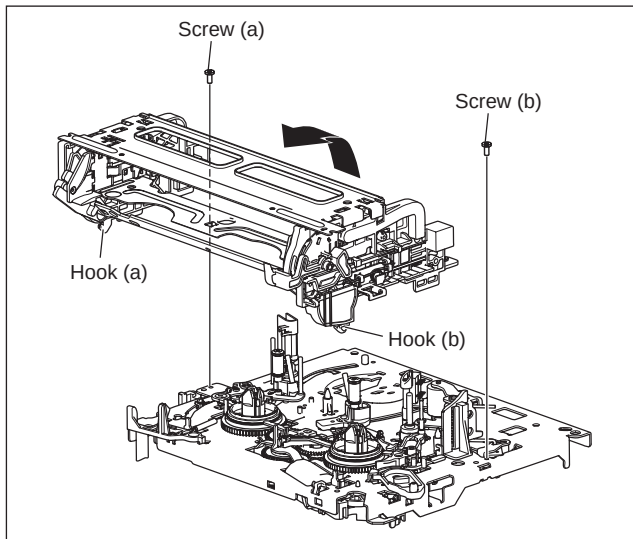


Fig.2-3-7

#### 2.3.6.1.2 Installation (phase adjustment)

- (1) Turn gear (a) of the loading motor assembly so that the main deck connects to the guide hole (a) of the drive lever.
- (2) Hook the main deck to hooks (a) and (b).
- (3) Place the projection of the drive lever to section (a) of the side frame (R) and install the cassette holder to the main deck. Make sure that the bosses of the side frame (L/R) connect with the holes (a) and (b) of the main deck.
- (4) Secure screws (a) and (b).

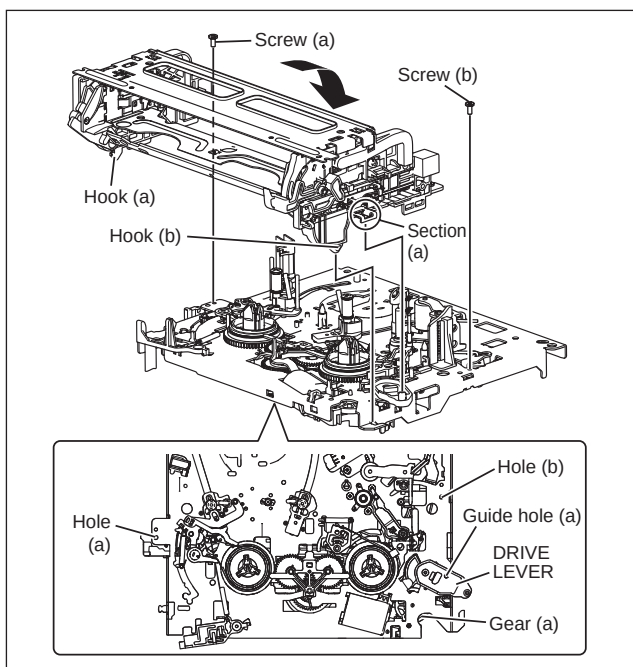


Fig.2-3-8

#### 2.3.6.1.3 Disassembling

- (1) Release hook (a) to remove the earth spring (1) from the top frame.
- (2) Release the catches (a) and (b) and pull the top frame in the direction shown by the arrow (a) to remove it.
- (3) Pull out the side frame (R).
- (4) Pull out the cassette holder assembly and drive arm assembly from the side frame (L).

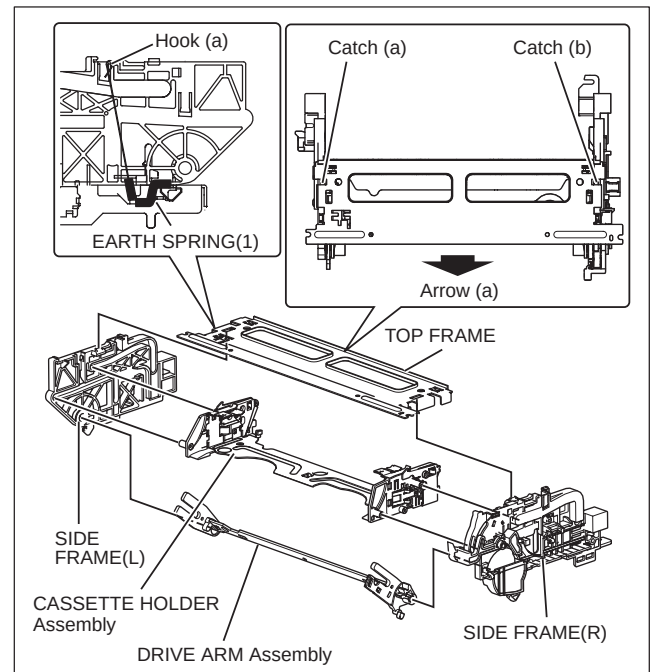


Fig.2-3-9

#### 2.3.6.1.4 Assembling (installation and phase adjustment)

- (1) Turn gear (a) of the loading motor assembly so that the main deck connects to the guide hole (a) of the drive lever.
- (2) Place the projection of the drive lever on section (a) of the side frame (R) and install the side frame (R) to the main deck.
- (3) Secure screw (b).
- (4) Place section (b) of the drive arm on the gear of the side frame (R). Make sure that the pin of the door opener connects with section (c) of the drive arm.
- (5) Place the drive arm on section (d) of the side frame (L) and install the side frame (L) on the main deck. Be sure to connect the earth spring (1) to the side frame (L).
- (6) Secure screw (a).
- (7) Turn gear (a) of the loading motor assembly until the drive arm is vertical.
- (8) Place the slit of the side frame (L/R) at the foot of the cassette holder assembly and install the cassette holder.
- (9) Place the top frame on the position guide (a) of the side frame (L/R) and push it in the direction shown by the arrow (a) for installation.
- (10) Hook the earth spring (1) to the hook (a) of the top frame.

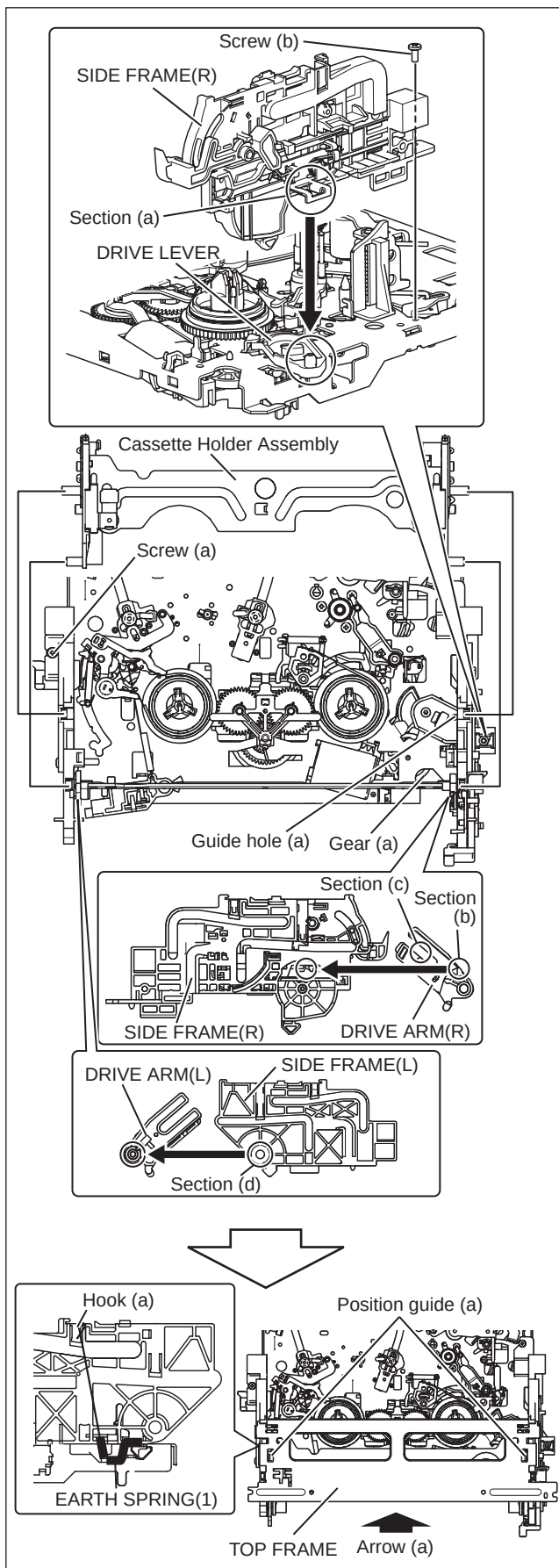


Fig.2-3-10

### 2.3.6.2 A/C head

#### 2.3.6.2.1 Removal

- (1) Remove screws (a) and (b).
- (2) Remove the A/C head together with the head base.
- (3) Remove the screws (c), (d) and (e) to remove the spring (a) and the A/C head from the Head base.

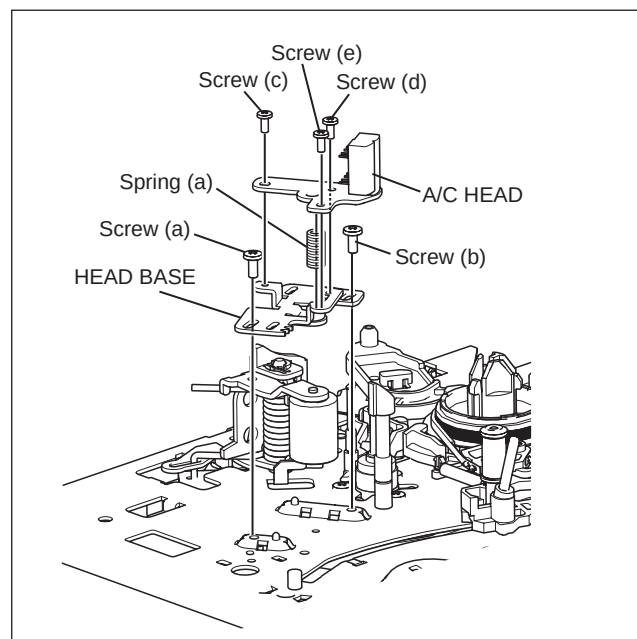


Fig.2-3-11

#### 2.3.6.2.2 Installation (initial setting)

To install the A/C head to the head base, secure the screws in the order of (c), (d) and (e). To make the adjustment easy, temporarily elevate the A/C head.

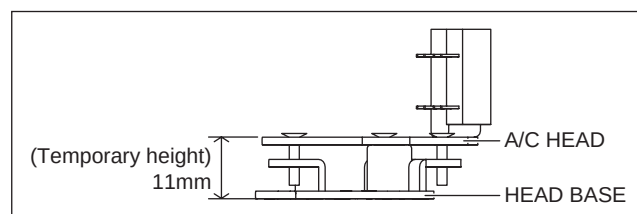


Fig.2-3-12

### 2.3.6.3 Guide arm, pinch roller arm

#### 2.3.6.3.1 Removal

- (1) Remove the spring (a) from the hook (a) and detach the guide arm assembly.
- (2) Release the catch (a) to remove the lid guide.
- (3) Remove the spring (b) from the hook (b) and detach the pinch roller arm assembly.

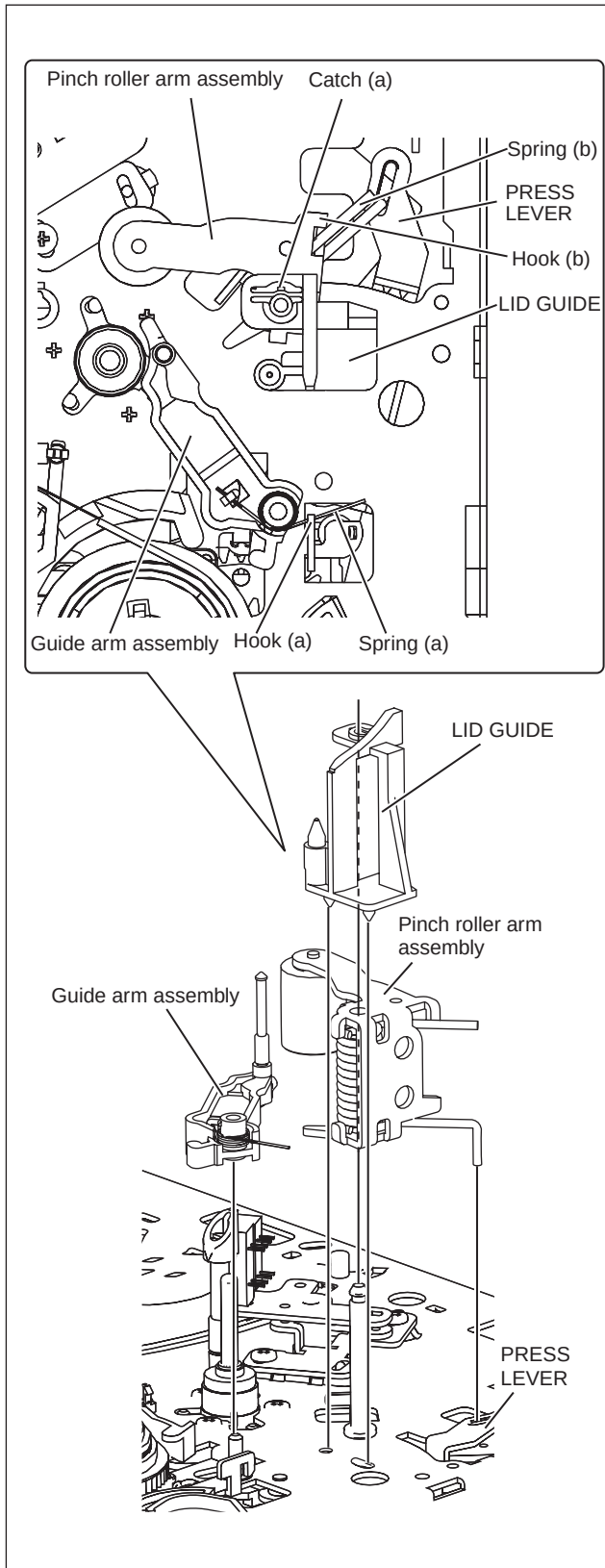


Fig.2-3-13

### 2.3.6.4 Idler arm, idler gear 1/2

#### 2.3.6.4.1 Removal

- (1) Release the catches (a) and (b) to detach the idler arm.
- (2) Detach the idler gear 1/2.

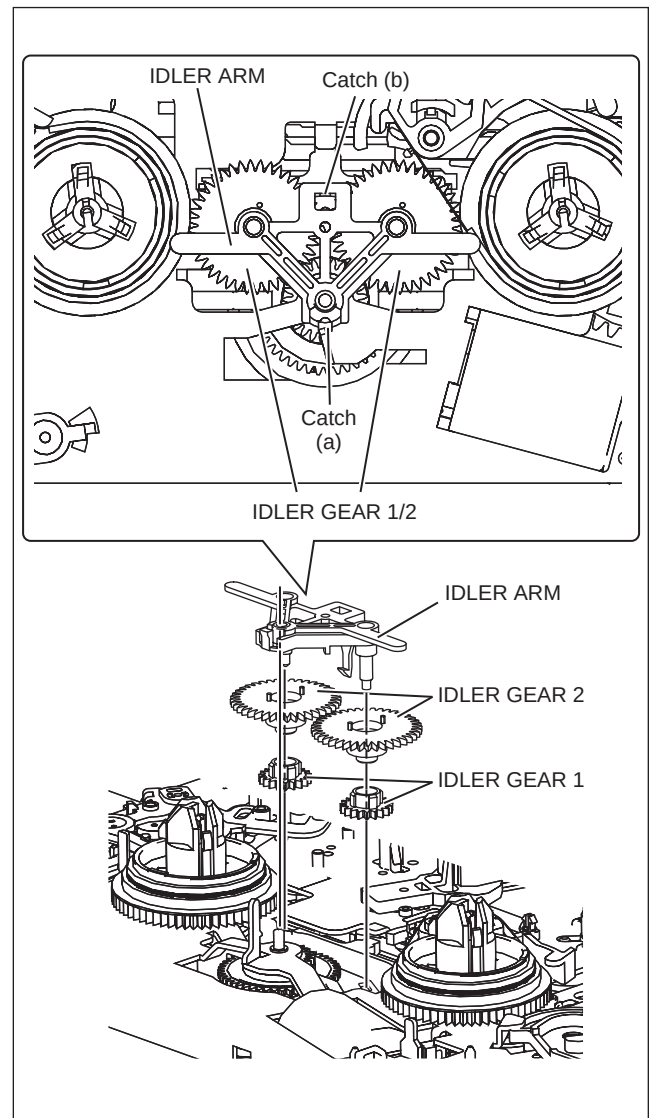


Fig.2-3-14

### 2.3.6.5 Main brake (T), brake lever, tension arm, reel disk (S/T), Rec safety lever

#### 2.3.6.5.1 Removal

- (1) Remove the spring (a). (Detach section (b) of the spring (a).)
- (2) Release the catch (a) to detach the main brake (T).
- (3) Release the catch (b) to detach the reel disk (T) and the spacer.
- (4) Lift up and turn section (b) of the brake lever counterclockwise to remove the brake lever.
- (5) Remove the spring (b) from the hook (a).
- (6) Release the catch (c) to detach the tension arm.
- (7) Release the catch (d) to detach the reel disk (S) and the spacer.
- (8) Remove the spring (c) from the hook (b).
- (9) Turn the tension arm base in the direction shown by arrow (a) to release catch (e). Place the projections of the tension arm base to the holes (a) to detach the tension arm base.
- (10) While releasing the catch (f), turn the Rec safety lever counterclockwise to remove it.

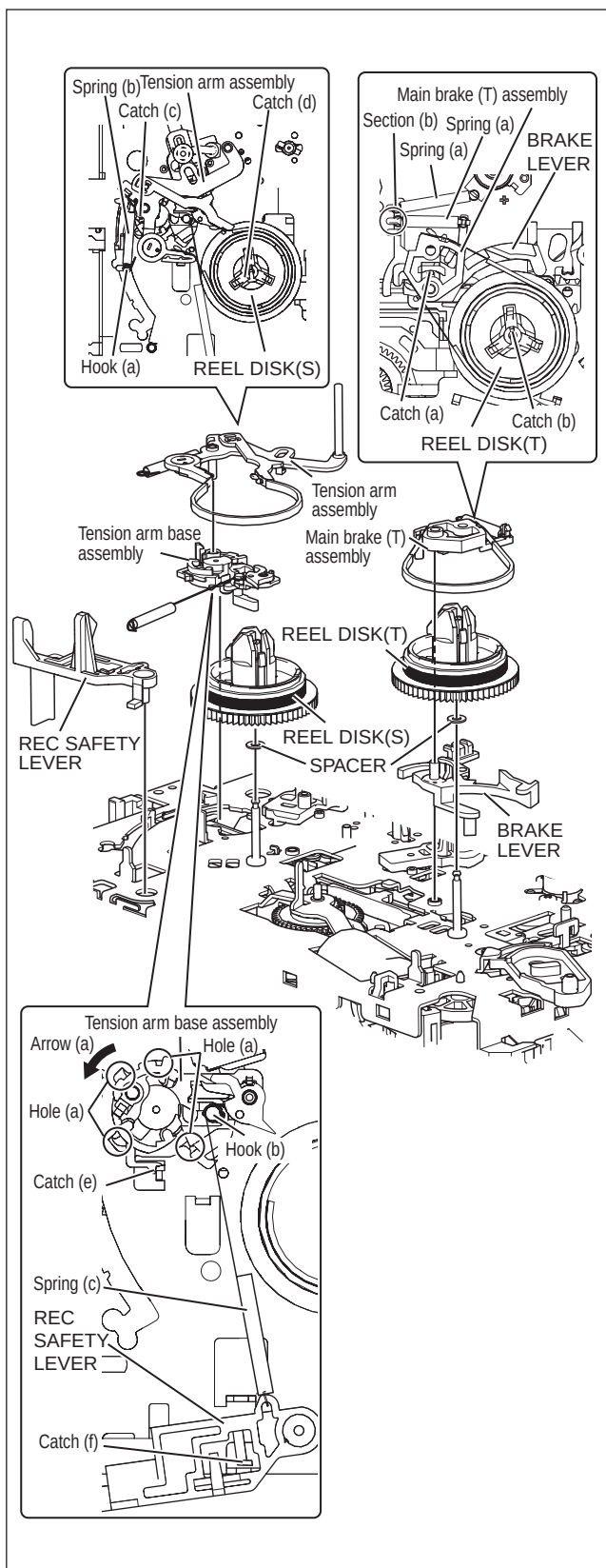


Fig.2-3-15

### 2.3.6.6 Press lever, control cam, capstan brake assembly, loading motor assembly

#### 2.3.6.6.1 Removal

- (1) Remove the slit washer (a) to detach the press lever.
- (2) Release the slit washer (b) to detach the control cam.
- (3) Release the catch (b) to detach the capstan brake assembly.
- (4) Remove the solder (a).
- (5) Remove the screw (a).
- (6) Release the catches (c) and (d) to detach the loading motor assembly.

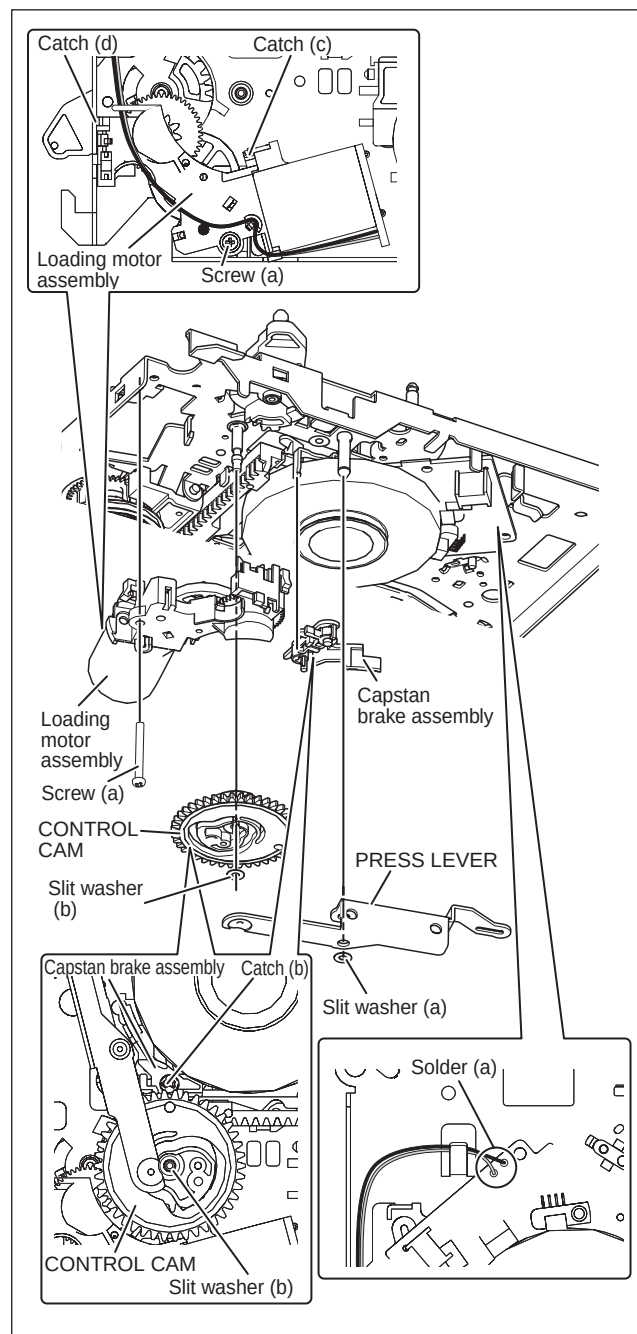


Fig.2-3-16

### 2.3.6.6.2 Installation (phase adjustment)

- (1) Attach the loading motor assembly to the main deck.
- (2) Secure the screw (a).
- (3) Solder the wire to section (a).
- (4) Arrange the wire along with the position guide (b).
- (5) Attach the capstan brake assembly to the main deck.
- (6) Place the main deck on the guide hole (a) of the control plate.
- (7) Place the main deck on the guide hole (b) of the drive lever.
- (8) Place the main deck on guide hole (c) of the control cam to install the control cam.
- (9) Move the capstan brake in the direction shown by the arrow (a) to attach the press lever to the shaft (a). Make sure that the boss of the press lever fits in the control cam, and that the shaft (b) of the pinch roller arm assembly connects with the hole of the press lever.
- (10) Attach slit washer (a) to shaft (a).

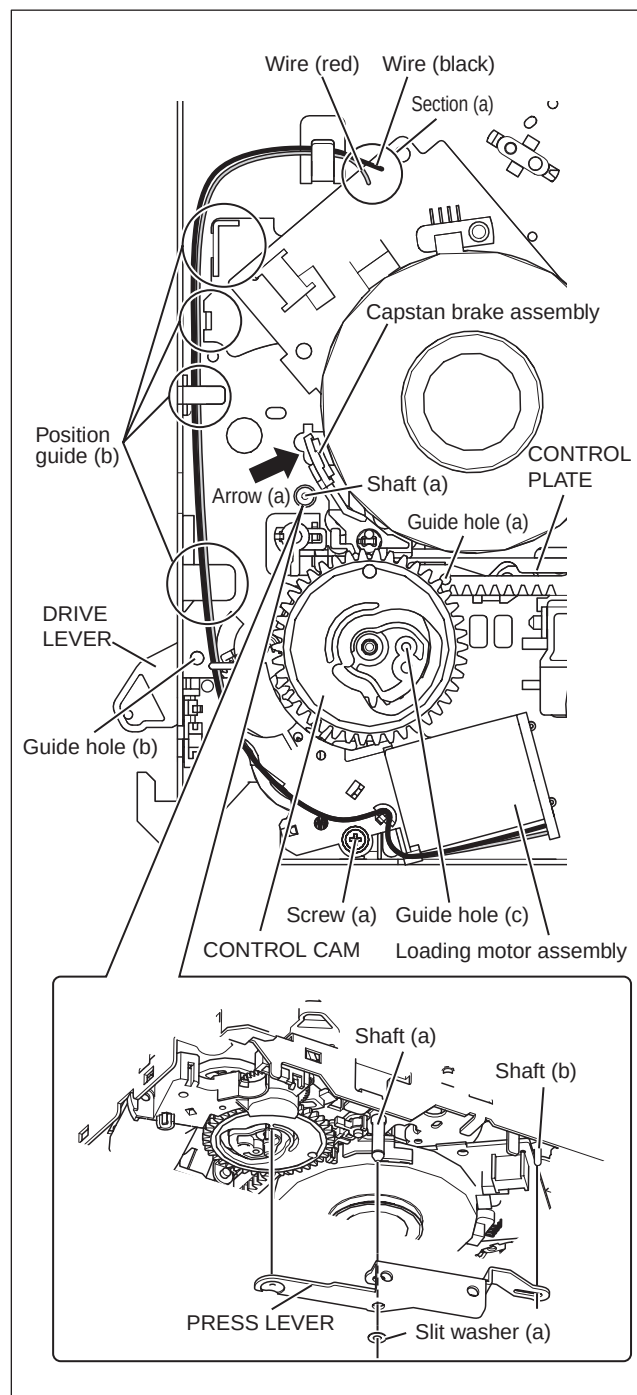


Fig.2-3-17

**Note:**

- When replacing the worm bearing of the loading motor assembly, attach it according to the following specification.

If worm bearing is not attached correctly, a mechanism noise may occur. (See Fig. 2-3-18)

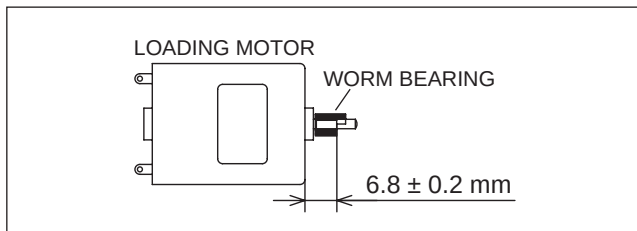


Fig.2-3-18

### 2.3.6.7 Capstan motor, load gear, control plate

#### 2.3.6.7.1 Removal

- (1) Detach the belt.
- (2) Check that the FFC connector on the drum is disconnected.
- (3) Release the catch (a) to remove the FFC wire.
- (4) Remove the screws (a) to detach the capstan motor.
- (5) Remove the screws (b) to detach the fixing plate.
- (6) Release the catch (b) to detach the load gear.
- (7) Turn the load gear (S/T) in the loading direction to detach it.
- (8) Remove the control plate.

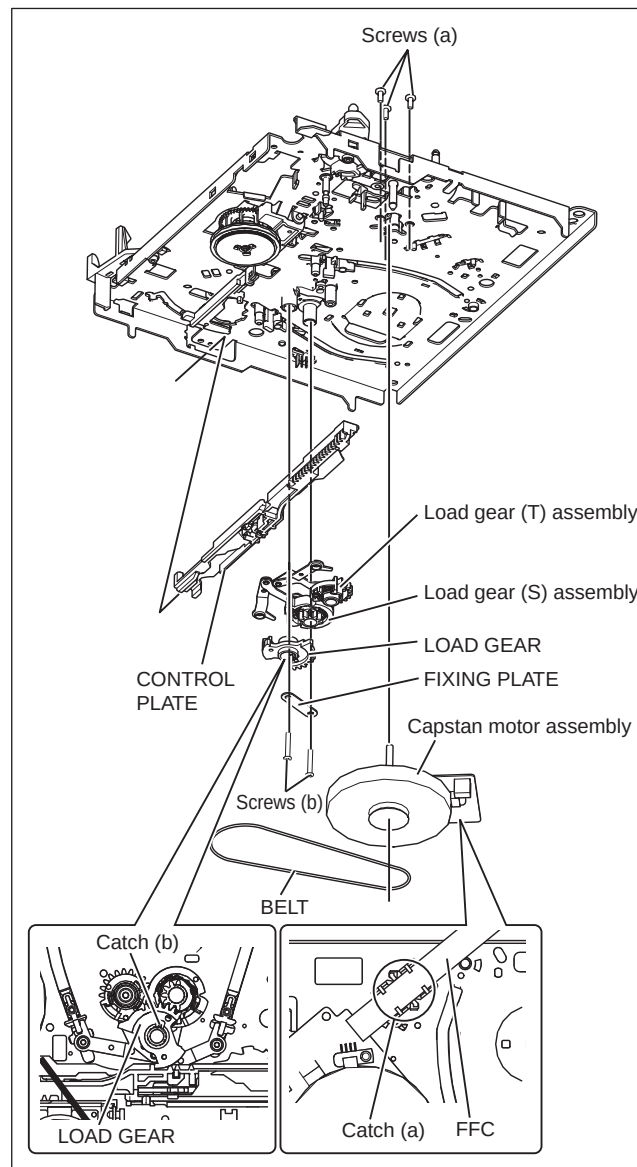


Fig.2-3-19

### 2.3.6.7.2 Installation (phase adjustment)

- (1) Place the main deck on the guide hole (a) of the tension arm lever.
- (2) Place the main deck on the guide hole (b) of the brake lever.
- (3) Attach the control plate to align with the position guide (a).
- (4) Place the hole (c) of the load arm (T) on the pole base (T) and the load gear (T) on the load gear base.
- (5) Place the hole (d) of the load arm (S) on the pole base (S) and the load gear (S) on the load gear base. Be sure to align the guide mark (e) of the load gear (T) to that of the load gear (S).
- (6) Turn the load gear (S/T) in the unloading direction to place the main deck on the guide hole (f) of the load gear (T).
- (7) Place the main deck on the guide hole (g) of the control plate.
- (8) Attach the load gear on the load gear base so that the control plate is placed on the edge (h) of the load gear.
- (9) Place the fixing plate on the shaft of the load gear base and secure the screws (b).

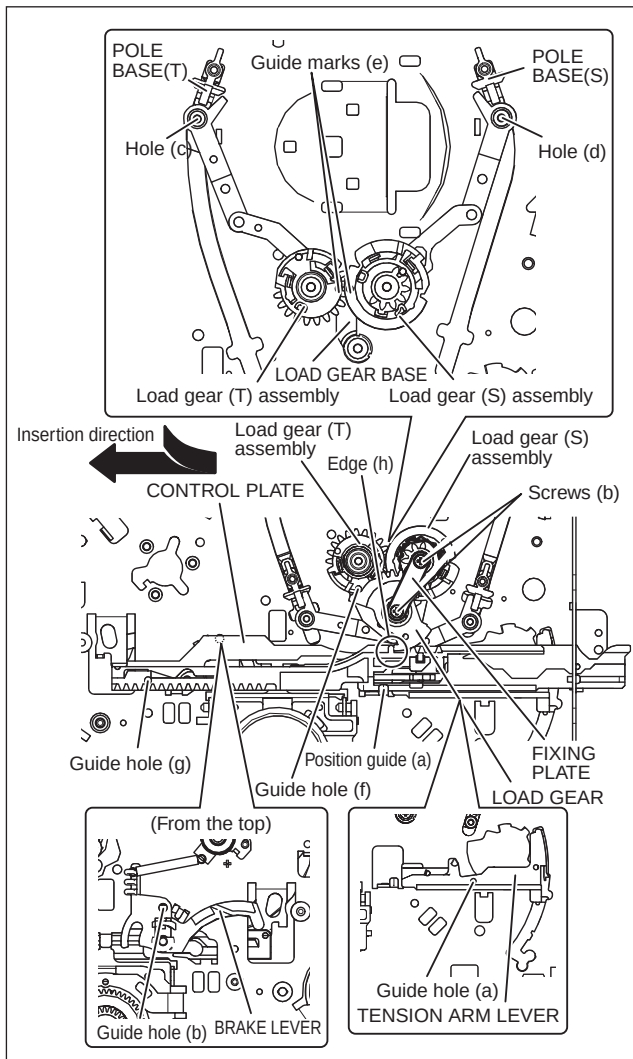


Fig.2-3-20

### 2.3.6.8 Clutch unit assembly, direct gear

#### 2.3.6.8.1 Removal

- (1) Remove the slit washer (a) to detach the clutch unit assembly.
- (2) Remove the spring (a) and the direct gear.

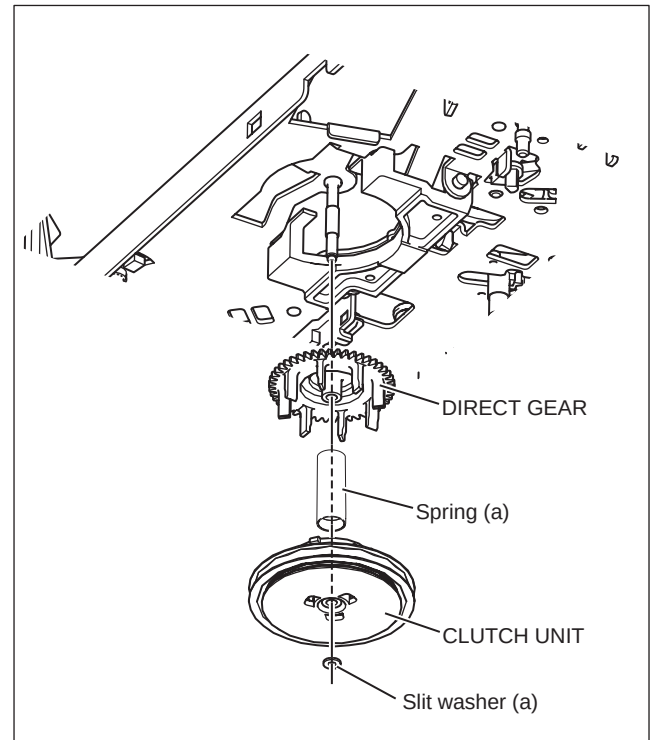
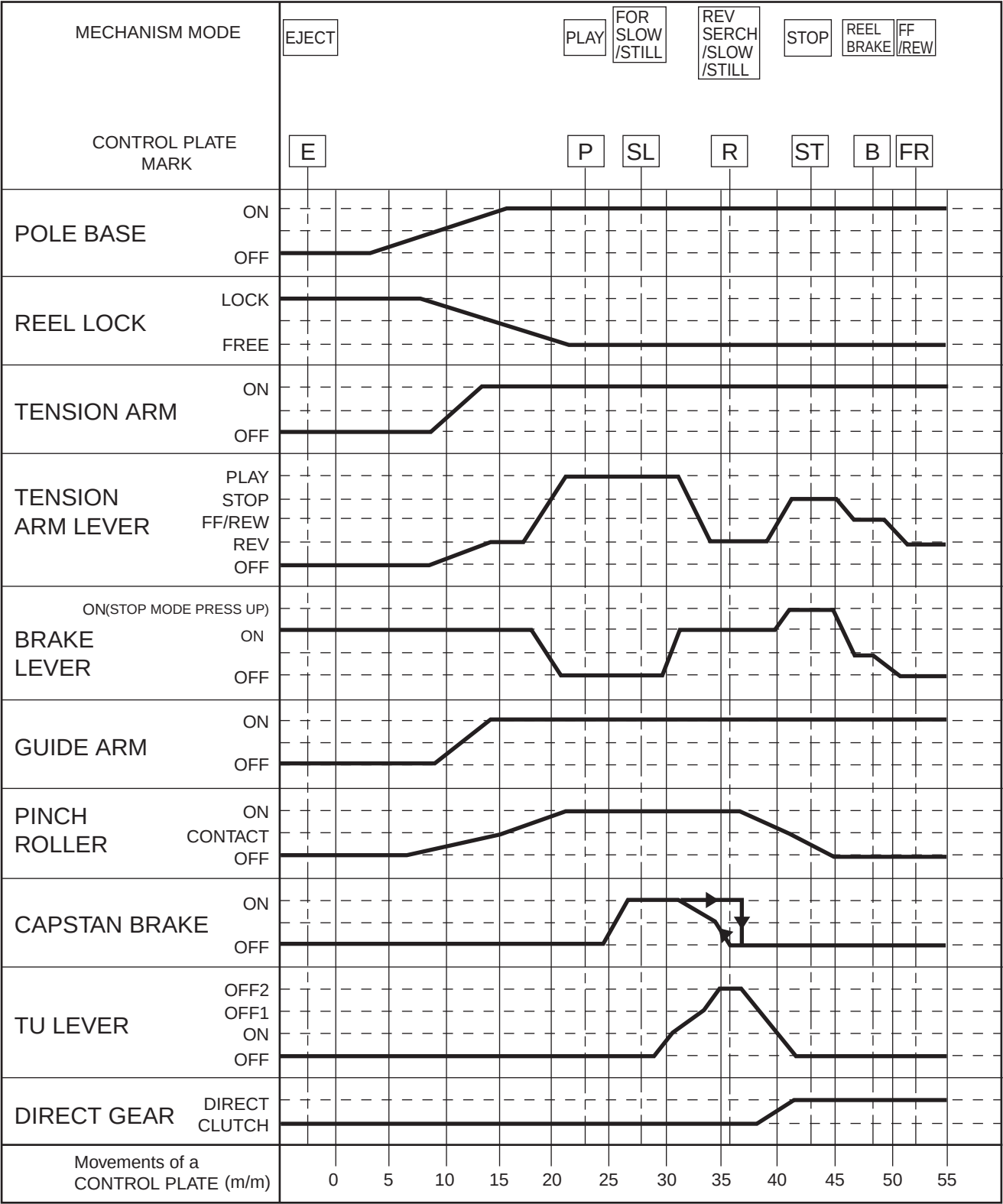


Fig.2-3-21

2.3.7 MECHANISM TIMING CHART



## 2.3.8 REMARKS

### 2.3.8.1 Cleaning

- (1) For cleaning of the upper drum (particularly video heads), use fine-woven cotton cloth with alcohol soaks through. Do not move the cloth but turn the upper drum counterclockwise.

**NOTE:**

Make sure not to move the cloth in the vertical direction to the video head, since it may cause damage of the video heads.

- (2) For cleaning of parts of the tape transport system except the upper drum, use fine-woven cotton cloth or cotton swab soaked alcohol.
- (3) After cleaning, confirm that the cleaned parts are completely dry before loading the deck with cassette tape.

### 2.3.8.2 Applying oil and grease

- (1) Periodical oiling and greasing are not required but should be done to new parts when replacing. If oil and grease on the other parts of the other party are old and dirty, wipe them clean and apply new oil or grease.
- (2) For parts and points to apply oil and grease, refer to the exploded view of the 3.3 VHS MECHANISM ASSEMBLY. Fig.2-3-22 specifies oil and grease to be used.
- (3) When oiling, clean the objective parts with alcohol first and apply one or two drop(s) of oil. Too much oiling causes rotary parts to slip because of oil leakage.

| Classification | Part No.    | Symbol in drawing |
|----------------|-------------|-------------------|
| Grease         | KYODO-SH-JB | AA                |
| Oil            | COSMO-HV56  | BB                |

specifies oil and grease to be used

Fig.2-3-22



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(No.86700)



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# SECTION 3

## PARTS LIST

### 3.1 DVC MECHANISM ASSEMBLY

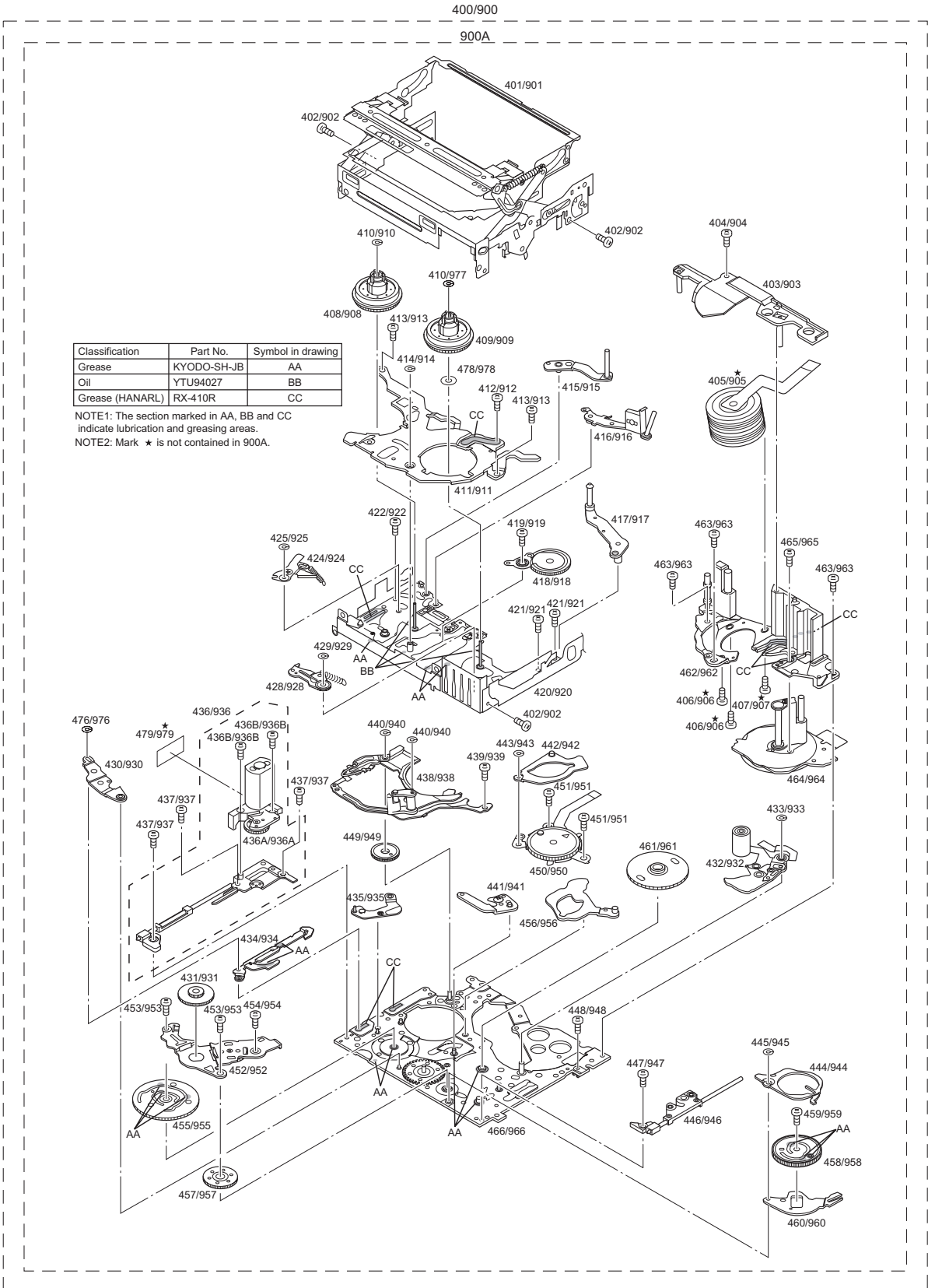


Fig.3-1-1

### 3.1.1 DVC MECHANISM ASSEMBLY PART LIST

- Since parts numbers described here are the numbers at the time of manual issue, they are subject to change without notice. Therefore, be sure to see a parts list in the service manual of each model as for parts numbers.
- To distinguish the mechanism assembly with the symbol number of 400-499 from the mechanism assembly with the symbol number of 900-999, see the following procedures.

(1) See the numbers on the backside of the MAIN DECK ASSY.

For example, "29D\*\*\*\*\*" is printed on the backside of the mechanism assembly with the symbol number of 900-999 (YMA0029D in this example). See the first three characters and numbers from the left.

(2) See the color of the SLIT WASHER on the REEL DISK (TU).

A red slit washer is used (the same color as a slit washer of CASSETTE GUIDE (SUP)) in the mechanism assembly with the symbol number of 400-499. A black slit washer is used in the mechanism assembly with the symbol number of 900-999.

However, the black slit washer may be changed into a red one for the purpose of parts unification.

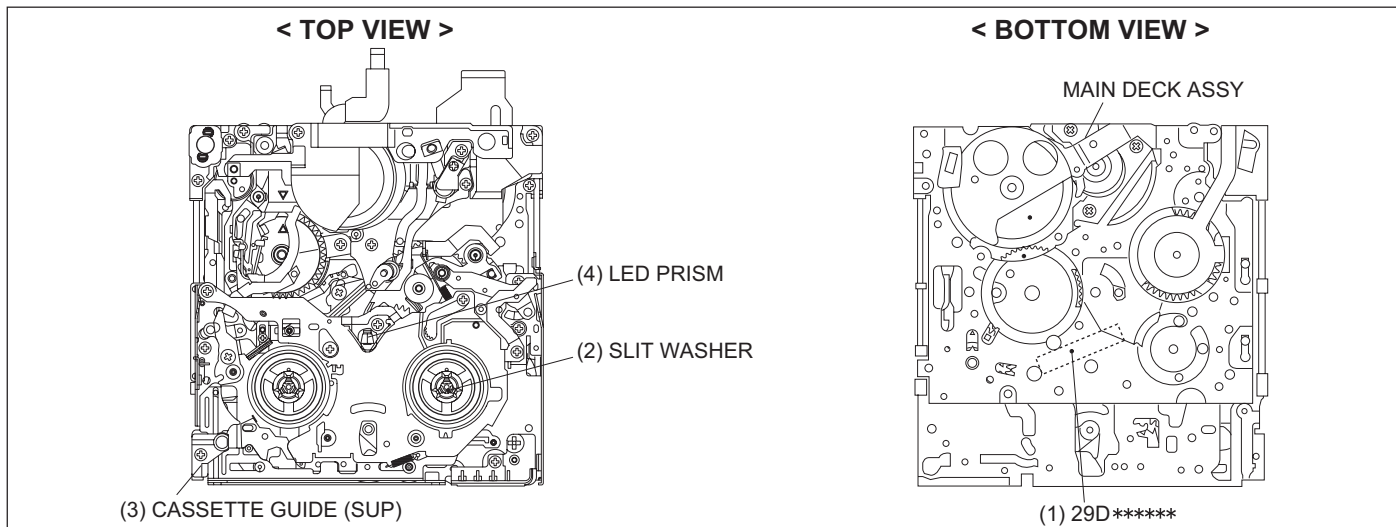
(3) See the color of the CASSETTE GUIDE(SUP).

Light-brown CASSETTE GUIDE(SUP) is used in the mechanism assembly with the symbol number of 400-499.

Black CASSETTE GUIDE(SUP) is used in the mechanism assembly with the symbol number of 900-999.

(4) See the shape of the LED PRISM. LED PRISM consists of only resin in the mechanism assembly with the symbol number of 400-499.

Upper part of the LED PRISM is covered with black metal in the mechanism assembly with the symbol number of 900-999.



| Part Name             | Symbol No. | Part No.      | Part No.     | Part No.     | Symbol No. | Part No.      | Patr No.     |
|-----------------------|------------|---------------|--------------|--------------|------------|---------------|--------------|
| MECHA(A) ASSY         | 400        | YMA0029C      | YMA0029M     | YMA0029L     | 900        | YMA0029H      | YMA0029E     |
| MECHA(A) ASSY         | -          | -             | -            | -            | 900A       | YMA0029D      | -            |
| CASSETTE HOUSING ASSY | 401        | LY31543-002E* | LY31543-002H | ←            | 901        | LY32870-001G* | LY32870-001J |
| MINI SCREW,X3         | 402        | YQ43893-8     | ←            | ←            | 902        | ←             | ←            |
| UPPER BASE ASSY       | 403        | LY31542-001J  | ←            | ←            | 903        | LYH30420-001A | ←            |
| MINI SCREW            | 404        | YQ43893*      | QYSPSPU1425M | ←            | 904        | ←             | ←            |
| DRUM ASSY             | 405        | **            | **           | **           | 905        | **            | **           |
| DAMP.SCREW ASSY,X2    | 406        | LY42820-001A  | ←            | ←            | 906        | ←             | ←            |
| DAMP.SCREW ASSY       | 407        | LY42820-002A  | ←            | ←            | 907        | ←             | ←            |
| REEL DISK ASSY (SUP)  | 408        | LY31538-001B* | LY31538-001F | ←            | 908        | ←             | ←            |
| REEL DISK ASSY (TU)   | 409        | LY31538-002B* | LY31538-002H | LY31538-002G | 909        | LY31538-002H  | ←            |
| SLIT WASHER,X2 or X1  | 410        | YQ44246,(x2)  | ←,(x2)       | ←,(x2)       | 910        | ←*,(x1)       | ←,(x2)       |
| REEL COVER ASSY       | 411        | LY10217-001A* | LY10217-001F | ←            | 911        | LY10372-001D  | ←            |
| MINI SCREW            | 412        | LY42120-001A* | LY42120-002A | ←            | 912        | ←             | ←            |
| MINI SCREW,X2         | 413        | LY41945-003A  | ←            | ←            | 913        | ←             | ←            |
| SLIT WASHER           | 414        | YQ44246       | ←            | ←            | 914        | ←             | ←            |
| TENSION ARM ASSY      | 415        | LY42025-001C  | ←            | ←            | 915        | LY43725-001D  | ←            |
| SLANT POLE ARM ASSY   | 416        | LY31535-001F  | ←            | ←            | 916        | LYH40269-001A | ←            |
| TU ARM ASSY           | 417        | LY42031-001G* | LY42031-001K | ←            | 917        | LY43731-001F  | ←            |
| SWING ARM ASSY        | 418        | LY31531-001D  | ←            | ←            | 918        | ←             | ←            |
| MINI SCREW            | 419        | YQ43893       | ←            | ←            | 919        | ←             | ←            |
| SLIDE DECK FINAL ASSY | 420        | LY20530-003B* | LY20530-003E | ←            | 920        | LYH30424-001A | ←            |

| Part Name                   | Symbol No. | Part No.      | Part No.     | Part No.     | Symbol No. | Part No.      | Patr No.     |
|-----------------------------|------------|---------------|--------------|--------------|------------|---------------|--------------|
| MINI SCREW,X2               | 421        | YQ43893       | ←            | ←            | 921        | ←             | ←            |
| MINI SCREW                  | 422        | LY43023-001A  | ←            | ←            | 922        | ←             | ←            |
| PAD ARM ASSY                | 424        | LY31533-001E  | ←            | ←            | 924        | LYH30419-001A | ←            |
| SLIT WASHER                 | 425        | YQ44246       | ←            | ←            | 925        | ←             | ←            |
| TU BRAKE ASSY               | 428        | LY42016-001B  | ←            | ←            | 928        | LYH40270-001A | ←            |
| SLIT WASHER                 | 429        | YQ44246       | ←            | ←            | 929        | ←             | ←            |
| TENSION CONTROL LEVER ASSY  | 430        | LY41959-001B  | ←            | ←            | 930        | LY43684-001A  | ←            |
| CENTER GEAR                 | 431        | LY31525-001B  | ←            | ←            | 931        | LY32861-001A  | ←            |
| PINCH ROLLER ARM FINAL ASSY | 432        | LY31516-001E  | ←            | LY31516-001F | 932        | ←             | ←            |
| SLIT WASHER                 | 433        | YQ44246       | ←            | ←            | 933        | ←             | ←            |
| TENSION CONTROL PLATE ASSY  | 434        | LY41956-001C  | ←            | ←            | 934        | LY43681-001A  | ←            |
| BRAKE CONTROL LEVER ASSY    | 435        | LY41962-001B* | LY41962-001C | ←            | 935        | LY43687-001A  | ←            |
| MOTOR BRACKET ASSY          | 436        | LY20525-002C  | ←            | ←            | 936        | LYH30421-001A | ←            |
| LOADING MOTOR               | 436A       | QAR0138-001   | ←            | ←            | 936A       | ←             | ←            |
| TAPPING SCREW,x2            | 436B       | LY41940-001A  | ←            | ←            | 936B       | ←             | ←            |
| MINI SCREW,x3               | 437        | YQ43893       | ←            | ←            | 937        | ←             | ←            |
| GUIDE RAIL ASSY             | 438        | LY20528-001R* | LY20528-001U | ←            | 938        | LYH30422-001A | ←            |
| MINI SCREW                  | 439        | YQ43893       | ←            | ←            | 939        | ←             | ←            |
| SLIT WASHER,X2              | 440        | YQ44246       | ←            | ←            | 940        | ←             | ←            |
| SLIDE LEVER2 ASSY           | 441        | LY31498-001C  | ←            | LY31498-001D | 941        | LY32843-001A  | ←            |
| LOADING PLATE ASSY          | 442        | LY41965-001A  | ←            | ←            | 942        | LY43690-001A  | ←            |
| SLIT WASHER                 | 443        | YQ44246       | ←            | ←            | 943        | ←             | ←            |
| EJECT LEVER                 | 444        | LY31522-001B  | ←            | ←            | 944        | LY32858-001A  | ←            |
| SLIT WASHER                 | 445        | YQ44246       | ←            | ←            | 945        | ←             | ←            |
| BASE R ASSY                 | 446        | LY41929-001E* | LY41929-001F | ←            | 946        | LYH40271-001A | ←            |
| MINI SCREW                  | 447        | YQ43893       | ←            | ←            | 947        | ←             | ←            |
| MINI SCREW                  | 448        | LY41945-001B  | ←            | ←            | 948        | ←             | ←            |
| MODE GEAR                   | 449        | LY41930-001A  | ←            | ←            | 949        | LY43665-001A  | ←            |
| ROTARY ENCODER              | 450        | QSW0876-003   | ←            | ←            | 950        | ←             | ←            |
| MINI SCREW,X2               | 451        | YQ43893       | ←            | ←            | 951        | ←             | ←            |
| GEAR COVER ASSY             | 452        | LY31524-001A  | ←            | ←            | 952        | LY32860-001A  | ←            |
| MINI SCREW,X2               | 453        | YQ43893       | ←            | ←            | 953        | ←             | ←            |
| MINI SCREW                  | 454        | YQ43893-4     | ←            | ←            | 954        | ←             | ←            |
| MAIN CAM ASSY               | 455        | LY41948-001C  | ←            | ←            | 955        | LY43676-001A  | ←            |
| SLIDE ARM ASSY              | 456        | LY41941-001B  | ←            | ←            | 956        | ←             | ←            |
| CONNECT GEAR 2              | 457        | LY41951-001B  | ←            | ←            | 957        | LY43678-001A  | ←            |
| SUB CAM ASSY                | 458        | LY41954-001B  | ←            | LY41954-001E | 958        | ←             | ←            |
| MINI SCREW                  | 459        | LY42120-001A  | ←            | ←            | 959        | ←             | ←            |
| CONTROL ARM ASSY            | 460        | LY41952-001A  | ←            | ←            | 960        | LY43692-001A  | ←            |
| REEL GEAR 1                 | 461        | LY31523-001B  | ←            | ←            | 961        | LY32859-001A  | ←            |
| DRUM BASE ASSY              | 462        | LY31508-002A* | LY31508-002B | LY33372-001A | 962        | LY31508-002B  | ←            |
| SCREW,X3                    | 463        | QYSPSPU1425M  | ←            | ←            | 963        | ←             | ←            |
| CAPSTAN MOTOR               | 464        | QAR0142-001   | ←            | ←            | 964        | ←             | ←            |
| MINI SCREW                  | 465        | YQ43893       | ←            | ←            | 965        | ←             | ←            |
| MAIN DECK ASSY              | 466        | LY10210-001D* | LY10210-001G | ←            | 966        | LY10367-001D* | LY10367-001E |
| SLIT WASHER                 | 476        | YQ44246       | ←            | ←            | 976        | ←             | ←            |
| SLIT WASHER                 | 477        | -             | -            | -            | 977        | YQ44246-6     | -            |
| WASHER                      | 478        | -             | -            | -            | 978        | LY42047-005A  | ←            |
| SPACER                      | 479        | -*            | LY43987-001B | ←            | 979        | ←             | ←            |

**NOTE:**

MARK ← is same as left.

MARK - is not used.

MARK \* reference model was also changed.

MARK \*\* shows different parts number, depending on models.

3.2 VHS-C MECHANISM ASSEMBLY

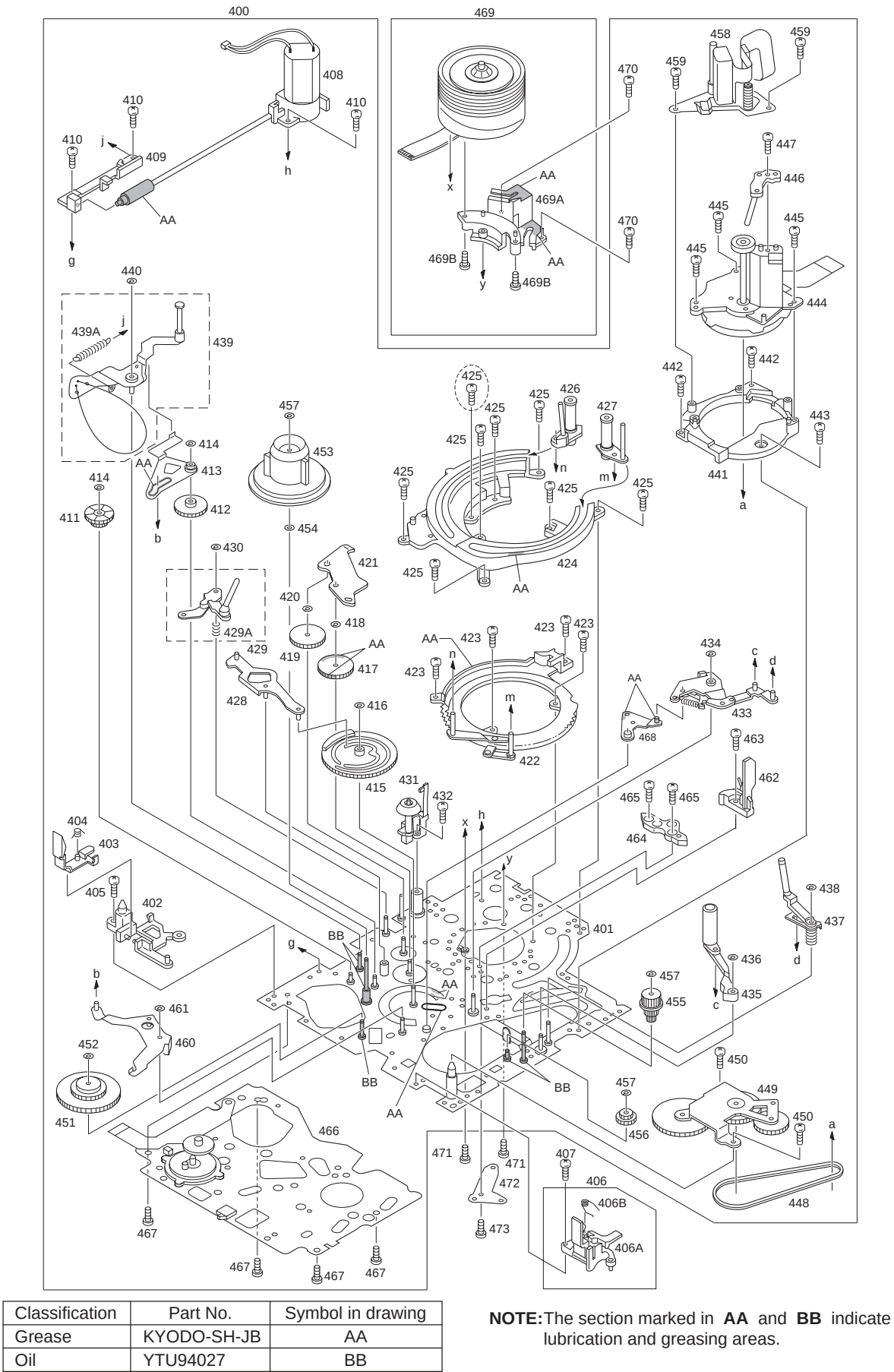


Fig.3-2-1

### 3.2.1 VHS-C MECHANISM ASSEMBLY PARTS LIST

- Since parts numbers described here are the numbers at the time of manual issue, they are subject to change without notice. Therefore, be sure to see a parts list in the service manual of each model as for parts numbers.

| Part Name                  | Symbol No. | Part No.          | Part No.     | Part No.     | Part No.     | Part No.     |
|----------------------------|------------|-------------------|--------------|--------------|--------------|--------------|
| MECHA(B) ASSY              | 400        | YMA0033A-E        | YMA0042A-E   | YMA0034A-E   | YMA0036A-E   | YMA0040A-E   |
| MAIN DECK ASSY             | 401        | LY20612-001B      | ←            | ←            | ←            | ←            |
| CASSETTE GUIDE (LEFT)      | 402        | LY31817-001A      | ←            | ←            | ←            | ←            |
| SW LEVER (LEFT)            | 403        | LY31815-001A      | ←            | ←            | ←            | ←            |
| TORSION SPRING             | 404        | LY42581-001A      | ←            | ←            | ←            | ←            |
| SCREW                      | 405        | LY42722-001A      | ←            | ←            | ←            | ←            |
| CASSETTE GUIDE ASSY(RIGHT) | 406        | -                 | -            | YQ44339A-7   | ←            | ←            |
| SW.LEVER(RIGHT)            | 406A       | -                 | -            | YQ32162-1-3  | ←            | ←            |
| TORSION SPRING             | 406B       | -                 | -            | YQ44340-1-4  | ←            | ←            |
| SCREW                      | 407        | -                 | -            | LY42819-001A | ←            | ←            |
| MOTOR BRACKET ASSY         | 408        | LY31826-001A      | ←            | ←            | ←            | ←            |
| WORM BRACKET               | 409        | YQ20793           | LY20951-001A | YQ20793      | ←            | LY20951-001A |
| SCREW,X3                   | 410        | LY42722-001A      | ←            | ←            | ←            | ←            |
| WHEEL GEAR                 | 411        | LY31925-001A      | ←            | ←            | ←            | ←            |
| MIDDLE GEAR                | 412        | LY42730-001A      | ←            | ←            | ←            | ←            |
| CANCEL LEVER ASSY          | 413        | LY42521-001A      | ←            | ←            | ←            | ←            |
| SLIT WASHER,X2             | 414        | LY42754-003A      | ←            | ←            | ←            | ←            |
| CONTROL CAM                | 415        | YQ20827-2-1       | ←            | ←            | ←            | ←            |
| SLIT WASHER                | 416        | PQM30017-25       | ←            | ←            | ←            | ←            |
| LOADING GEAR(T)ASSY        | 417        | LY42733-001A      | ←            | ←            | ←            | ←            |
| SLIT WASHER                | 418        | LY42754-003A      | ←            | ←            | ←            | ←            |
| LOADING GEAR(S)ASSY        | 419        | LY42732-001A      | ←            | ←            | ←            | ←            |
| SLIT WASHER                | 420        | LY42754-003A      | ←            | ←            | ←            | ←            |
| COVER PLATE                | 421        | LY42403-001A      | ←            | ←            | ←            | ←            |
| LOADING RING ASSY          | 422        | LY42452-001A      | ←            | ←            | ←            | ←            |
| SCREW,X4                   | 423        | LY42728-001A      | ←            | ←            | ←            | ←            |
| GUIDE RAIL                 | 424        | LY10239-001A      | ←            | ←            | ←            | ←            |
| SCREW,X8 or X7             | 425        | LY42728-001A,(X8) | ←,(X7)       | ←,(X8)       | ←,(X8)       | ←,(X7)       |
| POLE BASE(S)ASSY           | 426        | LY30161-001B      | ←            | ←            | ←            | ←            |
| POLE BASE(T)ASSY           | 427        | LY30162-002A      | ←            | ←            | ←            | ←            |
| DRIVE LEVER ASSY           | 428        | LY42523-001A      | ←            | ←            | ←            | ←            |
| SLANT ARM ASSY             | 429        | LY42545-001B      | LY44000-001B | LY42545-001B | ←            | LY44000-001B |
| TORSION SPRING(S)          | 429A       | LY42547-001A      | LY43992-001A | LY42547-001A | ←            | LY43992-001A |
| SLIT WASHER                | 430        | LY42754-003A      | ←            | ←            | ←            | ←            |
| ROLLER BASE ASSY           | 431        | LY42739-003A      | ←            | ←            | ←            | ←            |
| SCREW                      | 432        | LY42722-001A      | ←            | ←            | ←            | ←            |
| LINK ARM ASSY              | 433        | LY42494-001A      | ←            | ←            | ←            | ←            |
| SLIT WASHER                | 434        | PQM30017-25       | ←            | ←            | ←            | ←            |
| PINCH ROLLER ARM ASSY      | 435        | LY40018-002A      | ←            | ←            | LY40018-005A | ←            |
| SLIT WASHER                | 436        | PQM30017-25       | ←            | ←            | ←            | ←            |
| TAKE UP GUIDE ARM ASSY     | 437        | LY42541-001B      | ←            | ←            | ←            | ←            |
| SLIT WASHER                | 438        | LY42754-003A      | ←            | ←            | ←            | ←            |
| TENSION ARM ASSY           | 439        | LY42571-001A      | ←            | ←            | ←            | ←            |
| TENSION SPRING             | 439A       | LY42669-001A      | ←            | ←            | ←            | ←            |
| SLIT WASHER                | 440        | LY42754-003A      | ←            | ←            | ←            | ←            |
| MOTOR BASE                 | 441        | YQ20797-1-5       | ←            | ←            | ←            | ←            |
| SCREW,X2                   | 442        | LY42722-001A      | ←            | ←            | ←            | ←            |
| SCREW                      | 443        | YQ44460           | ←            | ←            | ←            | ←            |
| CAPSTAN MOTOR              | 444        | QAR0212-001       | QAR0212-002  | QAR0212-001  | QAR0212-002  | ←            |
| TAPPING SCREW,X3           | 445        | YQ44304           | ←            | ←            | ←            | ←            |
| SLANT POLE BASE ASSY       | 446        | LY42731-001A      | ←            | ←            | ←            | ←            |
| TAPPING SCREW              | 447        | YQ44304           | ←            | ←            | ←            | ←            |
| TIMING BELT                | 448        | YQ43710-2         | ←            | ←            | ←            | ←            |
| CENTER PULLEY UNIT         | 449        | LY42678-001A      | ←            | ←            | ←            | LY42678-003A |

| Part Name                   | Symbol No. | Part No.     | Part No.     | Part No.     | Part No.     | Part No.     |
|-----------------------------|------------|--------------|--------------|--------------|--------------|--------------|
| SCREW,X2                    | 450        | LY42722-002A | ←            | ←            | ←            | ←            |
| SUPPLY CLUTCH ASSY          | 451        | LY42670-001A | ←            | ←            | ←            | ←            |
| SLIT WASHER                 | 452        | LY42754-003A | ←            | ←            | ←            | ←            |
| REEL DISC                   | 453        | YQ31861-1-7  | ←            | ←            | ←            | ←            |
| WASHER                      | 454        | LY42755-001A | ←            | ←            | ←            | ←            |
| TAKE UP GEAR                | 455        | LY31924-001A | ←            | ←            | ←            | ←            |
| BRAKE SUB GEAR              | 456        | LY42738-001A | ←            | ←            | ←            | ←            |
| SLIT WASHER,X3              | 457        | LY42754-003A | ←            | ←            | ←            | ←            |
| A/C HEAD UNIT               | 458        | LY42544-001B | LY42544-002A | LY42544-001B | ←            | LY42544-002A |
| SCREW,X2                    | 459        | SPSN1750Z    | ←            | ←            | ←            | ←            |
| EJECT LEVER ASSY            | 460        | LY42517-001A | ←            | ←            | ←            | ←            |
| SLIT WASHER                 | 461        | LY42754-003A | ←            | ←            | ←            | ←            |
| LED GUIDE                   | 462        | YQ31833-1-1  | ←            | ←            | ←            | ←            |
| SCREW                       | 463        | LY42722-001A | ←            | ←            | ←            | ←            |
| DRUM SPACER                 | 464        | LY42729-001A | ←            | ←            | ←            | ←            |
| SCREW,X2                    | 465        | LY42722-001A | ←            | ←            | ←            | ←            |
| ROTARY ENCODER              | 466        | QSW0888-001  | ←            | QSW0888-002  | ←            | ←            |
| SCREW,X4                    | 467        | LY42722-002A | ←            | ←            | ←            | ←            |
| LINK LEVER                  | 468        | LY31814-001A | ←            | ←            | ←            | ←            |
| DRUM FINAL ASSY             | 469        | **           | **           | **           | **           | **           |
| CATCHER                     | 469A       | YDM1003-1-5  | ←            | ←            | ←            | ←            |
| SCREW,X2                    | 469B       | QYSPSPU1735M | ←            | ←            | ←            | ←            |
| SCREW,X2                    | 470        | LY42722-001A | ←            | ←            | ←            | ←            |
| SCREW,X2                    | 471        | SPSH1740Z    | ←            | ←            | ←            | ←            |
| BRUSH                       | 472        | LY43542-001A | ←            | ←            | ←            | ←            |
| SCREW                       | 473        | LY42722-003A | ←            | ←            | ←            | ←            |
| CASSETTE HOUSING FINAL ASSY | *155/481   | LY31808-001C | LY31808-002C | LY31808-001C | LY31808-001D | LY31808-002C |
| SCREW,X4                    | *156/482   | LY42722-003A | ←            | ←            | ←            | ←            |
| BRACKET(MECHA)              | *161/484   | LY32326-001A | ←            | ←            | ←            | ←            |
| SCREW,X2                    | *162/485   | LY42722-003A | ←            | ←            | ←            | ←            |
| SIDE BRACKET L              | *164/487   | LY31807-001A | ←            | ←            | ←            | ←            |
| SCREW                       | *165/488   | LY42722-003A | ←            | ←            | ←            | ←            |

**NOTE:**

MARK ← is same as left.

MARK - is not used.

MARK \* are shown in the parts list of FINAL ASSY of service manual of each model.

MARK \*\* shows different parts number, depending on models.

### 3.3 VHS MECHANISM ASSEMBLY

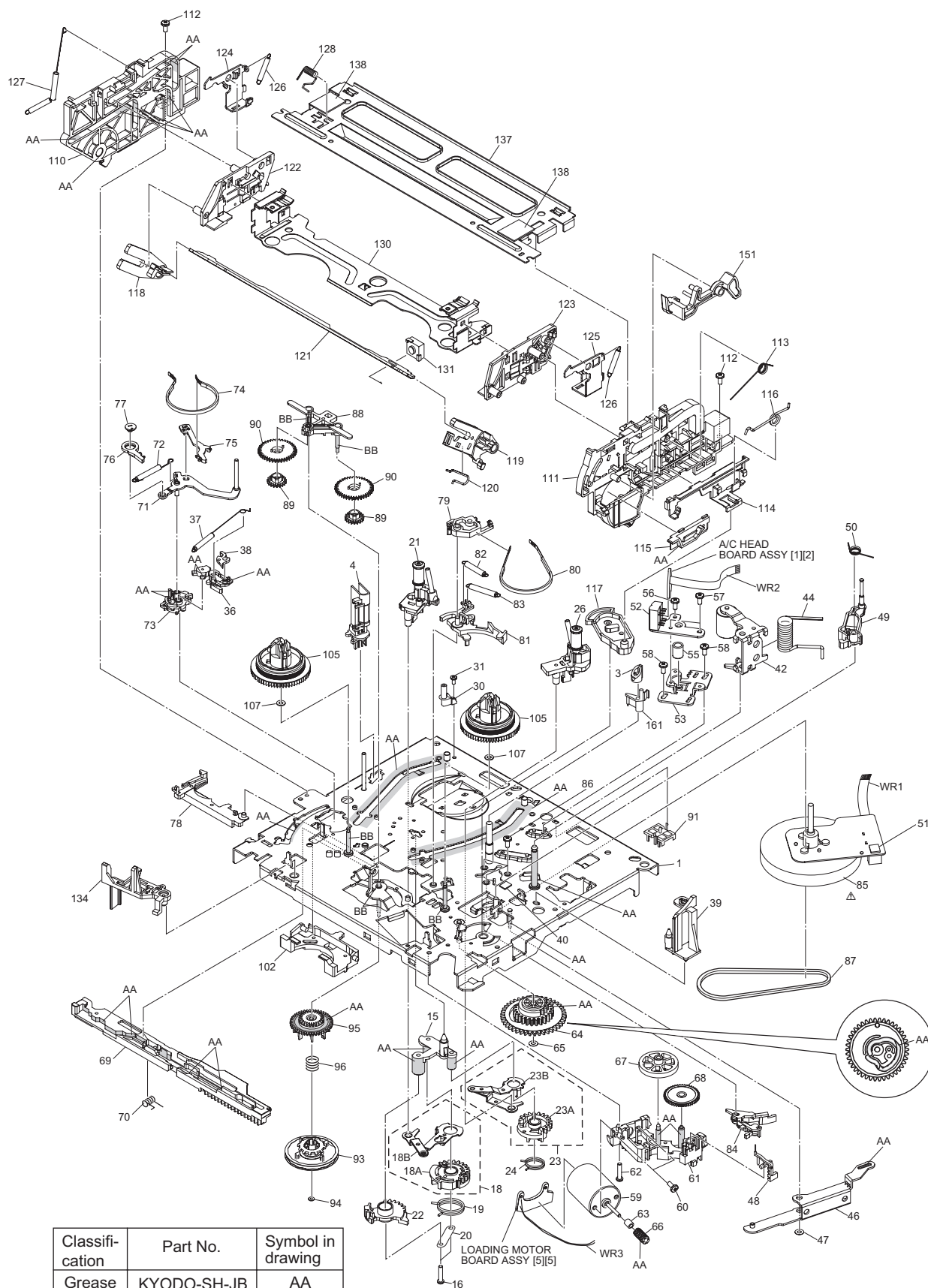


Fig.3-3-1

### 3.3.1 VHS MECHANISM ASSEMBLY PARTS LIST

- Since parts numbers described here are the numbers at the time of manual issue, they are subject to change without notice. Therefore, be sure to see a parts list in the service manual of each model as for parts numbers.

| System                   |            | VHS          |              | S-VHS        |              |
|--------------------------|------------|--------------|--------------|--------------|--------------|
| **Job No.                |            | V15D Series  | V16D Series  | V15S Series  | V16S Series  |
| Part Name                | Symbol No. | Part No.     | Part No.     | Part No.     | Part No.     |
| MAIN DECK ASSY           | 1          | LP21039-001N | LP21039-001S | LP21039-001R | LP21039-001S |
| GUIDE POLE CAP           | 3          | LP40097-002D | ←            | ←            | ←            |
| FULL ERASE HEAD          | 4          | QAH0082-001  | ←            | ←            | ←            |
| LOAD.GEAR BASE           | 15         | LP30958-001B | ←            | ←            | ←            |
| SCREW,X2                 | 16         | QYTPST2620Z  | ←            | ←            | ←            |
| LORD.GEAR(SUPPLY) ASSY   | 18         | LP40798-001A | ←            | ←            | ←            |
| LORD.GEAR(SUPPLY)        | 18A        | LP21040-001A | ←            | ←            | ←            |
| LORD.ARM(SUPPLY) ASSY    | 18B        | LP40799-001A | ←            | ←            | ←            |
| TORSION SPRING(SUPPLY)   | 19         | LP40837-001A | ←            | ←            | ←            |
| FIXING PLATE             | 20         | LP40903-001A | ←            | ←            | ←            |
| POLE BASE ASSY(SUPPLY)   | 21         | LP40806-001D | ←            | ←            | ←            |
| LOAD GEAR                | 22         | LP30959-002A | ←            | ←            | ←            |
| LORD. GEAR(TAKE UP) ASSY | 23         | LP40802-001B | LP40802-001C | LP40802-001B | LP40802-001C |
| LORD. GEAR(TAKE UP)      | 23A        | LP21041-001B | LP21041-001C | LP21041-001B | LP21041-001C |
| LORD.ARM(TAKE UP) ASSY   | 23B        | LP40803-001A | ←            | ←            | ←            |
| TORSION SPRING(TAKE UP)  | 24         | LP40838-001A | ←            | ←            | ←            |
| POLE BASE ASSY(TAKE UP)  | 26         | LP40808-001F | LP40808-001E | ←            | ←            |
| ARM BASE                 | 30         | -            | ←            | LP31020-004A | ←            |
| SCREW                    | 31         | -            | ←            | QYTDST2606Z  | -            |
| TU LEVER                 | 36         | LP21055-001E | ←            | ←            | ←            |
| TENSION SPRING           | 37         | LP40943-001A | ←            | ←            | ←            |
| T-UP HEAD                | 38         | LP40859-001D | ←            | ←            | ←            |
| LID GUIDE                | 39         | LP30961-001C | ←            | ←            | ←            |
| SPACER                   | 40         | LP30002-0B7A | ←            | ←            | -            |
| PINCH ROLLER ARM ASSY    | 42         | LP40810-001A | ←            | ←            | ←            |
| TORSION SPRING           | 44         | LP40840-001C | LP40840-001D | ←            | ←            |
| PRESS LEVER              | 46         | LP30963-001B | ←            | ←            | ←            |
| SLIT WASHER              | 47         | PQM30017-24  | ←            | ←            | ←            |
| S-SWITCH                 | 48         | -            | ←            | LP40930-002E | ←            |
| GIDE ARM ASSY            | 49         | LP40813-001D | ←            | ←            | ←            |
| TORSION SPRING           | 50         | LP40841-001A | ←            | ←            | ←            |
| SPACER                   | 51         | LP30002-090A | ←            | ←            | -            |
| A/C HEAD                 | 52         | QAH0081-001  | ←            | ←            | ←            |
| HEAD BASE                | 53         | LP30965-001A | ←            | ←            | ←            |
| COMPRESSION SPRING       | 55         | LP40842-001A | LP40842-001D | LP40842-001A | LP40842-001D |
| SCREWX1 A/C HEAD         | *56        | QYTDST2006M  | ←            | ←            | ←            |
| A/C HEAD SCREW,X2        | *57        | LP41036-001A | ←            | ←            | ←            |
| SCREW,X2 A/C HEAD        | *58        | QYTDST2606Z  | ←            | ←            | ←            |
| LOADING MOTOR            | 59         | QAR0023-001  | ←            | ←            | ←            |
| SCREW,X2                 | 60         | QYTPSP3003Z  | ←            | ←            | ←            |
| MOTOR BRACKET            | 61         | LP21056-002F | LP21056-002G | ←            | ←            |
| TAP SCREW                | 62         | QYTPST2620Z  | ←            | ←            | ←            |
| WORM BEARING             | 63         | LP40814-001B | ←            | ←            | ←            |
| CONTROL CAM              | 64         | LP21044-001D | ←            | ←            | ←            |
| SLIT WASHER              | 65         | PQM30017-24  | ←            | ←            | ←            |
| WORM GEAR                | 66         | LP40815-001A | ←            | ←            | ←            |
| HELICAL GEAR             | 67         | LP40816-001B | ←            | ←            | ←            |
| CONNECT GEAR             | 68         | LP40817-001A | ←            | ←            | ←            |

| System                 |            | VHS          |              | S-VHS        |              |
|------------------------|------------|--------------|--------------|--------------|--------------|
| **Job No.              |            | V15D Series  | V16D Series  | V15S Series  | V16S Series  |
| Part Name              | Symbol No. | Part No.     | Part No.     | Part No.     | Part No.     |
| CONTROL PLATE          | 69         | LP10400-001H | ←            | ←            | LP10400-001J |
| TORTION SPRING         | 70         | LP40843-001A | ←            | ←            | ←            |
| TENSION ARM ASSY       | 71         | LP40818-001B | ←            | ←            | ←            |
| TENSION SPRING         | 72         | LP40844-001C | LP40844-001E | LP40844-001D | LP40844-001E |
| TENSION ARM BASE       | 73         | LP21045-001D | ←            | ←            | ←            |
| TENSION BAND ASSY      | 74         | LP40821-001A | ←            | ←            | ←            |
| BAND HOLDER-1          | 75         | LP30967-001B | ←            | ←            | ←            |
| BAND HOLDER-2          | 76         | LP30968-001C | ←            | ←            | ←            |
| ADJUST PIN             | 77         | LP40822-002B | ←            | ←            | ←            |
| TENSION ARM LEVER      | 78         | LP31000-005E | ←            | ←            | ←            |
| MAIN BRAKE(TAKE UP)    | 79         | LP21046-001C | ←            | ←            | ←            |
| BAND BRAKE ASSY        | 80         | LP40824-001A | ←            | ←            | ←            |
| BRAKE LEVER            | 81         | LP30969-002A | LP30969-002B | LP30969-002A | LP30969-002B |
| TENSION SPRING         | 82         | LP30003-033B | ←            | ←            | ←            |
| TENSION SPRING         | 83         | LP30003-035B | ←            | ←            | ←            |
| CAPSTAN BRAKE ASSY     | 84         | LP40825-001B | ←            | ←            | ←            |
| CAPSTAN MOTOR          | 85         | QAR0204-002  | ←            | ←            | ←            |
| SCREW,X3 CAPSTAN MOTOR | 86         | QYTPSG2606M  | QYTPSG2606Z  | QYTPSG2606M  | QYTPSG2606Z  |
| BELTCAPSTAN MOTOR      | 87         | LP30005-010A | ←            | ←            | ←            |
| IDLER ARM              | 88         | LP30970-001A | ←            | ←            | ←            |
| IDLER GEAR 1,X2        | 89         | LP40828-004A | ←            | ←            | ←            |
| IDLER GEAR 2,X2        | 90         | LP40829-001B | LP40829-002A | LP40829-001B | LP40829-002A |
| WIRE HOLDER            | 91         | LP31014-001A | ←            | ←            | ←            |
| CLUTCH UNIT            | 93         | LP40934-001B | ←            | ←            | ←            |
| SLIT WASHER            | 94         | PQM30017-47  | ←            | ←            | ←            |
| DIRECT GEAR            | 95         | LP30973-001A | ←            | ←            | ←            |
| COMPRESS. SPRING       | 96         | LP40939-001A | ←            | ←            | ←            |
| CHANGE LEVER           | 102        | LP30974-001B | ←            | ←            | ←            |
| REEL DISK,X2           | 105        | LP21049-001A | ←            | ←            | ←            |
| SPACER,X2              | 107        | LP30017-004A | ←            | ←            | ←            |
| SIDE FRAME(L)          | 110        | LP10401-001F | LP10401-001H | LP10401-001F | LP10401-001H |
| SIDE FRAME(R)          | 111        | LP10402-001F | LP10402-001K | LP10402-001G | LP10402-001K |
| SCREW,X2               | 112        | QYTDST2606Z  | ←            | ←            | ←            |
| TORSION SPRING         | 113        | LP40917-001C | LP40917-001D | ←            | ←            |
| SIDE PLATE             | 114        | LP30976-001D | LP30976-001E | ←            | ←            |
| LIMIT PLATE            | 115        | LP30977-002D | ←            | ←            | ←            |
| LIMIT SPRING           | 116        | LP40846-001C | ←            | ←            | ←            |
| DRIVE LEVER            | 117        | LP31100-001B | ←            | ←            | ←            |
| DRIVE ARM(L)           | 118        | LP30978-001B | ←            | ←            | ←            |
| DRIVE ARM(R)           | 119        | LP30979-001H | LP30979-001N | LP30979-001H | LP30979-001N |
| TORSION SPRING         | 120        | LP40847-001B | ←            | ←            | ←            |
| CONNECT PLATE          | 121        | LP30980-001A | LP30980-001E | LP30980-001B | LP30980-001E |
| SIDE HOLDER(L)         | 122        | LP10403-001C | ←            | ←            | ←            |
| SIDE HOLDER(R)         | 123        | LP10404-001D | LP10404-001E | ←            | ←            |
| LOCK LEVER(L)          | 124        | LP30983-001A | LP30983-001B | LP30983-001A | LP30983-001B |
| LOCK LEVER(R)          | 125        | LP30984-001A | LP30984-001B | LP30984-001A | LP30984-001B |
| TENSION SPRING,X2      | 126        | LP40924-001C | LP40924-001D | ←            | ←            |
| EARTH SPRING(1)        | 127        | LP40856-001A | ←            | LP40856-001B | LP40972-001A |
| EARTH SPRING(2)        | 128        | LP40857-001B | ←            | ←            | ←            |
| C.HOLDER ASSY          | 130        | LP30981-001E | LP30981-001G | LP30981-001F | LP30981-001G |
| C.H STOPPER            | 131        | LP31135-001A | -            | LP31135-001A | -            |

| System                     |            | VHS          |              | S-VHS                     |                           |
|----------------------------|------------|--------------|--------------|---------------------------|---------------------------|
| **Job No.                  |            | V15D Series  | V16D Series  | V15S Series               | V16S Series               |
| Part Name                  | Symbol No. | Part No.     | Part No.     | Part No.                  | Part No.                  |
| R.SAFETY LEVER             | 134        | LP21051-002C | ←            | ←                         | ←                         |
| TOP FRAME                  | 137        | LP21052-001F | LP21052-001J | LP21052-001H              | LP21052-001J              |
| SPACER                     | 138        | LP30002-0A7A | -            | LP30002-0A7A              | -                         |
| DOOR OPENER                | 151        | LP30985-001G | ←            | ←                         | ←                         |
| TAPE GUIDE                 | 161        | -            | LP40993-001A | -                         | LP40993-001A              |
| E-CARD WIRE DRUM.M         | WR1        | WJT0059-001C | WJT0059-001E | WJT0059-001D              | WJT0059-001E              |
| E-CARD WIRE AC HEAD CN2001 | WR2        | WJT0067-001B | ←            | ←                         | ←                         |
| E-FL/RB WIRE LOADING MOTOR | WR3        | WJS0022-001A | ←            | ←                         | ←                         |
| MEMO                       | -          | PMD0035B-C   | PMD0040A-C   | PMD0036B-C<br>/PMD0039A-C | PMD0037A-C<br>/PMD0041A-C |

**NOTE:**

MARK ← is same as left.

MARK - is not used.

MARK \* shows that Symbol No. and Parts No. may sometimes be different from those in each manual. See the table below for final Symbol No. and Parts No.

MARK \*\* is Job No.

To identify a model, see the Job No. of the model.

Job No. is shown just above the service manual number at the lower right of the service manual of each model.